

Welcome to your CDP Climate Change Questionnaire 2019

C0. Introduction

C0.1

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

Evonik is one of the world's leading specialty chemicals companies. Our strengths include the balanced spectrum of our business activities, end-markets, and regions. Around 80 percent of sales come from market-leading positions¹, which we are systematically expanding. Our strong competitive position is based on close collaboration with customers, our high innovative capability, and our integrated technology platforms. Our specialty chemicals products make an indispensable contribution to the benefits of our customers' products, which generate their success in global competition. Close cooperation with our customers enables us to build up a deep knowledge of their business, so we can offer products tailored to their specifications and extensive technical service. Our technology centers and customer competence centers play an important role in this around the world. We drive forward our sustainability activities along the value chain in close dialogue with our stakeholders. As well as our own production processes and the products we market, we always consider the supply chain and the product benefits for our customers and their customers. We have observed rising demand for products that demonstrate a good balance of economic, ecological, and social factors. That opens up a broad spectrum of future-oriented business opportunities for Evonik in attractive markets. Sustainability has long been a growth driver in many of our businesses. In view of this, we defined our sustainability strategy in more detail in 2018, especially as regards foresighted resource management and integrating sustainability into strategic management processes. Sustainability is part of Evonik's market proposition. Our products and solutions are used in many areas that help to improve people's lives and minimize the use of scarce resources. In this way, we also aim to play our part in the United Nations' 17 Sustainable Development Goals, to be achieved by 2030. In the reporting period, we examined the SDGs and their relevance for the Evonik Group on various levels. Evonik is committed to observing internationally recognized standards and its own more far-reaching guidelines and principles of conduct. That includes, for example, the ten principles of the UN Global Compact. In addition, we are guided by the International Labour Standards issued by the International Labour Organization (ILO) and the Guidelines for Multinational Enterprises published by the Organisation for Economic Cooperation and Development (OECD). Evonik is involved in many networks such as the Chemie3 sustainability initiative of the German chemical industry, and the World Business Council for Sustainable Development (WBCSD). Together with our code of conduct, our global social policy (GSP) and our environment, safety, health, and quality (ESHQ) values provide a framework for responsible corporate management. We are convinced that sustainable and responsible business activities are vital for the future of companies. In view of this, we defined our sustainability strategy in more detail in 2018, especially as regards

foresighted resource management and integrating sustainability into strategic management processes.

Our specialty chemicals operations are divided into three chemical manufacturing segments, which operate close to their markets and customers and have a high degree of entrepreneurial independence. They are supported by a Services segment. The Nutrition & Care and Resource Efficiency segments operate principally in attractive markets with above-average growth rates. Both segments offer customers customized, innovation-driven solutions. The Performance Materials segment is characterized by processes that make intensive use of energy and raw materials. We have 105 production facilities in 28 countries on six continents and are therefore close to our markets and our customers. Our largest production sites, for example, Marl, Wesseling, and Rheinfelden (Germany), Antwerp (Belgium), Mobile (Alabama, USA), Shanghai (China), and Singapore, have integrated technology platforms used by various units.

Forward-Looking Statements: The following answers to the questions of the Carbon Disclosure Project prepared by Evonik include forward-looking statements that are subject to risks and uncertainties, including those pertaining to the anticipated benefits to be realized from the proposals described herein. Evonik has based these forward-looking statements on its views with respect to future events and financial performance. Actual financial performance could differ materially from that projected. Forward-looking statements represent estimates and assumptions only as of the date that they were made. The information contained in these answers is subject to change without notice and Evonik does not undertake any duty to update the forward-looking statements, and the estimates and assumptions associated with them, except to the extent required by applicable laws and regulations.

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
Row 1	January 1, 2018	December 31, 2018	No

C0.3

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

Australia
Belgium
Canada
China
France
Germany
Hungary
India
Indonesia
Italy
Japan
Netherlands

New Zealand
Poland
Portugal
Singapore
Slovakia
South Africa
Spain
Sweden
Taiwan, Greater China
Thailand
Turkey
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

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

EUR

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C-CH0.7

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

Row 1

Bulk organic chemicals

Polymers

Bulk inorganic chemicals

Chlorine and Sodium hydroxide

Soda Ash

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
Other C-Suite Officer	<p>The highest level of direct responsibility for climate change topics lies with the member of the Board of Management responsible for Human Resources, Sustainability and HSE (Health, Safety and Environment)</p> <p>RATIONALE: Sustainability including climate protection is a core element within Evonik's business strategy and risk management. As the corporate structure of Evonik consists of three different business units supported by a fourth one providing infrastructure services only on board level can be assured that an overarching approach takes place with respect to sustainability. Decisions about production, energy efficiency and climate protection initiatives can go hand in hand. This Board Member is one of four corporate directors on the board. The position was selected for oversight of all climate-related issues to ensure climate-related targets and measures are driven on a Group level to ensure a comprehensive and cohesive approach to climate protection.</p>

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding risk management policies</p>	<p>Climate-related topics are brought to the members of the board as needed by the Head of Corporate ESHQ. The head of ESHQ reports annually directly about environmental key performance indicators including climate-related KPIs, as well as climate-related target</p>

	<p>Reviewing and guiding business plans</p> <p>Setting performance objectives</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>achievement. This information takes place in the context of a Board meeting dedicate</p> <p>d to the discussion of sustainability KPIs as part of the Board's approval of Evonik's sustainability report. In addition CHRO and Head of ESHQ are members of the Corporate Responsibility Steering Committee and the Corporate ESHQ Steering Committee, both chaired by the Chief human resource officer.. Relevant topics in the field of sustainability, environment, safety, health and quality including the status and progress of various programs are discussed with the Heads of Evonik's segments and members of Evonik's extended board on a quarterly base. CONTRIBUTION OF GOVERNANCE MECHANISMS TO BOARD OVERSIGHT</p> <p>HT: The governance mechanisms selected ensure that the Board has as a comprehensive view on climate-related issues and can ensure a coherent and Group-wide response, if needed.</p>
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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
<p>Other C-Suite Officer, please specify</p> <p>The highest management level lies with the Chief human resource manager</p>	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

C1.2a

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

The Chief Human Resource Officer reports directly to the CEO and is the direct superior to the Head of Corporate ESH leading the group-wide activities on Health, Safety, Environment and Quality. In addition CHRO and Head of ESHQ are members of the Corporate Responsibility Steering Committee and the Corporate ESHQ Steering Committee, both chaired by the CHRO. Relevant topics in the field of sustainability, environment, safety, health and quality including the status and progress of various programs are discussed between CHRO, Head of ESHQ

and the Heads of Evonik's segments and members of Evonik's extended board on a quarterly base. The Heads of the segments are responsible to implement the strategic approach decided on group level within their segment.

RATIONALE: Sustainability including climate protection is a core element within Evonik's business strategy and risk management. As the corporate structure of Evonik consists of three different business units supported by a fourth one providing infrastructure services only on board level can be assured that an overarching approach takes place with respect to sustainability. Decisions about production, energy efficiency and climate protection initiatives can go hand in hand. This Board Member is one of four corporate directors on the board. The position was selected for oversight of all climate-related issues to ensure climate-related targets and measures are driven on a Group level to ensure a comprehensive and cohesive approach to climate protection.

The climate-related monitoring process is closely related to our reporting process. As the CHRO responsible for Human Resources, Sustainability and Environment, Health, Safety and Quality is directly responsible for our climate-related reporting. E.g. In 2018, he was responsible for signing off the climate-related sections in our Sustainability report and Evonik's response to the CDP Climate request 2018.

C1.3

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

No

C2. Risks and opportunities

C2.1

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

	From (years)	To (years)	Comment
Short-term	0	1	
Medium-term	1	3	
Long-term	3	10	

C2.2

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

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

C2.2a

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	At least three times a year risks/opportunities one year in the future, at least one time a year risks one to three years in the future, at least one time a year up to ten years in the future. Event risks are always assessed as a whole despite of the time range considered, e.g. if new environmental regulation affects costs for a defined investment during the next ten years the whole risk will be assessed regardless of the current reporting scope (e.g. current year forecast).

C2.2b

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

IDENTIFICATION:

To support the most complete possible identification of risks Evonik maintains a risk landscape that reflects all potential risk areas applicable to Evonik as a chemical company. The risk landscape explicitly includes non-financial risks that stem from all areas. According to the CSR Directive Implementation Act, such risks can include environmental issues.

Evonik's Group-wide internal opportunity and risk management is a central element in the management of the company. Our risk detection system meets the requirements for publicly listed companies and is aligned to international standards and principles such as COSO ERM. The aim is to identify opportunities and risks as early as possible and to define measures to counter and minimize risks and utilize opportunities.

Globally all relevant risks including climate change-related risks are reported and monitored at an early stage. We define risks as negative deviations from target values as defined during planning and forecasting processes.

The risk coordinator, at the direction of the management unit head, must ensure that it is possible to completely identify all risks applicable to the respective unit by using appropriate processes. This requires that information relevant to risks from subordinate organizations (e.g., business lines, sites) as well as from functional and regional perspectives is taken into consideration appropriately. The identified risks are continuously monitored by the respective risk owners. The Evonik risk portfolio is monitored and validated by the risk committee four times a year. Especially our ESHQ, Utilities & Waste disposal and corporate responsibility departments monitor climate-related legislative changes and academic publications. Potential risks are reported to the head of Corporate ESHQ, head of Corporate Responsibility and head of Technology& Infrastructure, who are accountable for the identification and evaluation of climate-related opportunities & risks. Our businesses continuously monitor market developments and indicate upcoming opportunities to the R&D departments, considering

climate-related customer and market needs in R&D (e.g. products that could help to support the fight against climate change). The identified opportunities and risks are updated at least four times a year and incorporated into strategic and midterm planning.

ASSESSMENT

In order to make a meaningful analysis of identified risks possible, the risk must be described appropriately. The cause and effect of the risk are also to be described. A risk owner must be named to ensure that the risk is handled and monitored adequately in the following process steps. The risk owner must have the required authorities and competences. Risks are assessed based on comprehensible and uniform criteria. The purpose of the assessment is to prioritize identified risks and thereby shine a clear light on the most important topics concerning the company's success. A netting of risks and opportunities is not allowed

Risks are assessed according to their net potential impact and likelihood of occurrence after implementation of mitigation actions.

The assessment is done based on the two criteria, probability of occurrence and impact.

Risks can be assessed as point values or ranges and for some exceptions a purely verbal assessment is allowed. As shown in our financial report we classify the probability of occurrence as low (1 – 10%), medium low (11 – 25%), medium (26 - 50%), medium high (51 - 75%) and high (76-100%) and the impact as low (0– 10 Mio. €), medium low (10– 100 Mio. €), medium (100– 250 Mio. €), medium high (250– 500 Mio. €) and high (> 500Mio. €) over a period of three years.

Impact is rated either quantitative or qualitative. The quantitative assessment reflects mainly impact on adj. EBITDA; if adj. EBITDA is no adequate KPI other impacts such as adjustments or taxes are assessed. A qualitative assessment is mainly based on pre-defined criteria (if applicable): attaining company goals, damage to reputation, required management time and obligatory report authorities. For all categories an individual description for each classification from low to high is provided. Hypothetical risks, that is, risks with an extremely low probability of occurrence, are classified as irrelevant, regardless of their potential effect. These include, for example, natural events such as earthquakes that, statistically, occur only once every 100 years. The classification of risks as hypothetical should always be done on the basis of commercial prudence.

SUBSTANTIVE FINANCIAL IMPACT:

Evonik defines risks and opportunities exceeding 100 Mio. € (expected value or following the risk matrix) over a period of three years as substantial. Those risks and opportunities are separately reported within the financial report. Risks with a potential above 500 Mio. € are considered endangering for the existence of the company.

C2.2c

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

	Relevance & inclusion	Please explain
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Current regulation	Relevant, always included	<p>Evonik considers risk from current regulation. E.g. the impact of cap and trade schemes like the EU ETS, in which Evonik participates. Current legislative discussions in the EU are expected to further increase carbon price. In this respect, the EU Emissions Trading Scheme (ETS) is the main regulatory framework that poses a risk to the European industry. Current trends in certificate price appear to be consistent with the regulator's aim for a much higher certificate price to effectively realize steering of energy generation according to climate requirements. Considering this risk, the EU ETS could influence Evonik directly through our own energy generation facilities participating in the EU ETS and indirectly, through our supply chain regarding energy supply, as we expect the prices for our purchased energy to rise. Between 2019 and 2021, Evonik sees a medium low risk due to the possible continuous tightening of the EU ETS. After the carve-out of Steag in 2014 and Carbon Black in 2011, our production is significantly less energy-intensive and any energy cost increase has a much less significant impact on our overall cost position. ii) INCLUSION IN RISK ASSESSMENT: Our Energy Managers, Sustainability Managers and our Legal team constantly monitor climate-related legislative changes and developments and analyze their potential impact on Evonik. Potential risks are reported to the Head of Corporate ESHQ, the Head of Corporate Responsibility and the Head of Technology & Infrastructure, who are accountable for the identification and evaluation of climate-related risks. Also, Enterprise Risk Management is informed about relevant risks as explained in the process description of identifying and assessing of risks.</p>
Emerging regulation	Relevant, always included	<p>i) EXAMPLE: Due to the recent developments in climate and energy politics and as a consequence of the Paris Agreement, it is almost certain that the regulatory pressure will increase on a national, an EU and an international level. One example of a new cap and trade scheme that could potentially affect Evonik in the coming years is the Chinese national carbon trading scheme, which was launched in December 2017. ii) INCLUSION IN RISK ASSESSMENT: Our Energy Managers, Sustainability Managers and our Legal team constantly monitor climate-related legislative changes and developments and analyze their potential impact on Evonik. Potential risks are reported to the Head of Corporate ESHQ, the Head of Corporate Responsibility and the Head of Technology & Infrastructure, who are accountable for the identification and evaluation of climate-related risks. Also, Enterprise Risk Management is informed about relevant risks as explained in the process description of identifying and assessing of risks.</p>
Technology	Relevant, always included	<p>i) EXAMPLE: In terms of risks, technology could potentially have an impact on our competitiveness via an increase of operational costs or via effects on our reputation. One example are developments in</p>

		<p>technology in the field of renewable energies, such as wind energy. Evonik still operates coal-fired power plants which will lead to increasing costs in the near future leading to a cost disadvantage. We have already started to switch from coal-fired power plants to gas and steam power stations to ensure competitiveness. The first carbon block has been replaced in 2016 and two more will follow by 2022 reducing CO₂ emission by 280,000 t/a. ii) INCLUSION IN RISK ASSESSMENT: Our Sustainability Managers constantly monitor and analyze technological changes and technical developments that could affect Evonik and analyze their potential impact. Potential risks are reported to the Head of Corporate ESHQ, the Head of Corporate Responsibility and the Head of Technology & Infrastructure, who are accountable for the identification and evaluation of climate-related risks. Also, Enterprise Risk Management is informed about relevant risks as explained in the process description of identifying and assessing of risks.</p> <p>Also, we constantly analyze the potential of emerging technologies such as carbon capture and storage in terms of their potential to help us mitigate climate-related risks and help increase our cost position and reduce GHG emissions.</p>
Legal	Relevant, always included	<p>i) EXAMPLE: Evonik considers the risk from climate-related litigation, e.g. due to issues resulting from the interpretation of climate-related regulations. One potential issue that might lead Evonik to litigate is due to a revision to the Renewable Energy Sources Act (EEG). This EEG revision that became effective at the start of 2017 declared that energy generation via capacity layer models in which several companies share an energy generation plant are not subject to the burden-free self-generation. For existing facilities an option for amnesty exists, if several conditions are met. The burden of prove lies with the participants in the capacity layer model. If the Bundesnetzagentur (Federal Network Agency) does not accept the arguments delivered by the participants EEG-savings of the past (since 2014) and future savings are at risk. Evonik is a participant in a capacity layer model together with other consortium partners since 2008. Considering the new interpretation, the 2017 EEG has applied to capacity layer models, this risk of retroactive EEG apportionment payments could influence our direct operations. Based on a timeframe of 3 years (2015-2017) for which potential retroactive payments could become relevant, Evonik calculates the financial impact of this risk to be medium. Evonik has already endeavored to meet all conditions stipulated for amnesty of existing plants but amnesty is not yet confirmed. ii) INCLUSION IN RISK ASSESSMENT: The manager responsible for monitoring climate-related legislation, especially regulation of energy markets, identified the risk from the changed</p>

		<p>interpretation of the EEG law regarding capacity layer models in already in 2015. Subsequently he analyzed the risk together with our legal team. The risk was then reported to the Technology& Infrastructure and Legal Leadership Team and the responsible Board Member as well as to Accounting and the Chief Risk Officer. Based on a thorough analysis relevant options to address the risk were derived and presented to the Board and other relevant bodies in order to achieve endorsement for the proposed path forward.</p>
Market	Relevant, always included	<p>i) EXAMPLE: Evonik considers potential market risks, which could potentially affect the demand for our products e.g. through the impact of climate-related reputation or shifts in markets. Markets here include especially sales and raw material markets.</p> <p>Sustainability and thus effects of climate change have an increasing influence on consumer spending and government actions as explained in emerging/ existing regulation. Both effects lead to market shifts that occur in different speed in dependence of the sensibility of the specific end market. Market risks arising from climate change are always included in the Evonik risk management system. Risks as well as opportunities appear in different Business Line where demand for products can decline or increase depending on the level of sustainability. For example, in the cosmetics industry Evonik sees opportunities increasing by demand for cleansing agents that do not rely on tropical oils such as palm oil but can be produced by fermentation which saves rain forests and CO2 emissions. On the other hand, demand can decline e.g. for fossil fuel additives regarding the ongoing trends of e-mobility.</p> <p>ii) INCLUSION IN RISK ASSESSMENT: Our Sustainability and Business Managers constantly monitor our sustainability-related performance incl. climate-related issues. We analyze the sustainability performance of our peers in order to better understand potentially emerging reputational risks. Potential risks are reported to the Heads of ESHQ, Head of Corporate Responsibility and the Heads of the affected business units, who are accountable for the identification and evaluation of climate-related risks. Also, Evonik identifies and prioritizes sustainability-related risks, including those related to climate change, by analyzing the expectations of important stakeholders. These are matched up with an internal assessment, thereby deriving the relevant fields of action for Evonik. The findings are documented. A materiality analysis is carried out regularly.</p>

Reputation	Relevant, always included	<p>i) EXAMPLE: Evonik considers potential risks arising from climate-related reputation which could potentially affect the demand for our products or our access to capital. Worldwide, investors, NGOs and the public are increasingly focusing on how companies are dealing with environmental issues such as climate change and how they are integrating these topics into their business strategies and transparent communication. Evonik maintains different landfills globally, which are carefully managed under compliance with the latest recommendations. Nevertheless, emotional and/or negative press could deteriorate our reputation as an environmentally friendly company, which is key in certain end markets. Currently, there is no indication that climate-related reputation risks might increase for Evonik. E.g., in 2018 the inclusion of Evonik in the Dow Jones Sustainability World and Europe Index, was confirmed – further strengthening our reputation. ii) INCLUSION IN RISK ASSESSMENT: Our Sustainability Managers constantly monitor our sustainability-related performance incl. climate-related issues. In addition, our business managers are observing our customers' and markets' sentiments. Also, we analyze the sustainability performance of our peers to better understand potentially emerging reputational risks. Potential risks are reported to the Heads of ESHQ, Head of Corporate Responsibility and the Heads of the affected business units, who are accountable for the identification and evaluation of climate-related risks. Also, Evonik identifies and prioritizes sustainability-related risks, including those related to climate change, by analyzing the expectations of important stakeholders. These are matched up with an internal assessment, thereby deriving the relevant fields of action for Evonik. The findings are documented. A materiality analysis is carried out regularly.</p>
Acute physical	Relevant, always included	<p>EXAMPLE: Evonik considers potential acute physical risks in the form of climate change-related extreme weather events, such as cyclones, hurricanes or floods which might affect our production facilities. An increase of such weather events affecting our facilities could result in increased operational and capital cost and disruption in our production. Evonik has several production sites in areas that suffered or almost suffered from severe hurricanes or typhoons during the last years. For example, Evonik Oil Additives USA Inc. temporarily had to shut down its production in Deer Park, Texas due to Tropical Storm Harvey in 2017. This risk has been identified by the impacted business early and implemented measures helped to reduce emerging costs significantly. This and similar risks for our production sites worldwide are closely monitored and if appropriated covered by insurance</p> <p>ii) INCLUSION IN RISK ASSESSMENT: The identification of such risks globally coordinated by our internal Insurance Services in close cooperation with production sites and respective business sites.</p>

		<p>Considering risks from acute physical events due to climate related changes our procurement department observes the reliability of our sourcing network intensely. Identified risks are assessed in cooperation with the accountable business managers and are reported to the Heads of the impacted departments. Depending on the impact and probability of occurrence risks are reported to the Corporate Risk Officer and the accountable board member either ad hoc or during the next regular risk assessment. Currently Evonik sees a potentially medium impact of risks related to acute physical events.</p>
Chronic physical	Relevant, always included	<p>I) EXAMPLE: Evonik considers chronic physical risks due to climate change related changes in precipitation extremes, such as droughts affecting our production (facilities). An increase of such weather events affecting our facilities could result in increased operational and capital cost and disruption in our production. During the last year a severe drought in central Europe resulted in low Rhine water levels that disrupted large parts of important channel transportation, which led to disruption of production in all parts of the Supply Chain based alongside the river or increased transportation costs. This risk has been identified by the impacted business five years ago and implemented measures helped to reduce emerging costs significantly. This and similar risks for our production sites worldwide are closely monitored and if appropriated covered by insurance.</p> <p>ii) INCLUSION IN RISK ASSESSMENT: The identification of such risks globally coordinated by our internal Insurance Services in close cooperation with production sites and respective business sites. Considering risks from chronic physical events due to climate related changes our procurement department observes the reliability of our sourcing network intensely. Identified risks are assessed in cooperation with the accountable business managers and are reported to the Heads of the impacted departments. Depending on the impact and probability of occurrence risks are reported to the Corporate Risk Officer and the accountable board member either ad hoc or during the next regular risk assessment. Currently Evonik sees a potentially medium impact of risks related to chronic or acute physical events.</p>
Upstream	Relevant, always included	<p>i) EXAMPLE: Evonik considers and assesses the risk type “interruption of supply” to be caused from disruption to the operations of suppliers due to climate change-related extreme weather events such as floods, cyclones or hurricanes. Evonik monitors suppliers and the risk of extreme weather events which might affect them. With the help of a supply chain transparency tool, such risks are identified for individual suppliers, e.g., for suppliers located in Japan, the risk of natural disasters is relatively high. Evonik closely monitors this risk and</p>

		<p>validates that we have further suppliers, located in other regions which could substitute supply in case of a disruption.</p> <p>ii) INCLUSION IN RISK ASSESSMENT: Our supply chain is designed at both a global and regional level according to clear, sustainability-oriented criteria and standards. Evonik regards adherence to these standards as a crucial value-adding factor and an important lever for minimizing risks. Evonik is one of the founding members of the initiative "Together for Sustainability" started in 2011. The initiative aims to harmonize industry standards and creates transparency regarding sustainability compliance at potential suppliers. The concluded audits are a fundamental component in securing our supply chain. For acute and chronic physical changes risks are identified as stated above.</p>
Downstream	Relevant, always included	<p>i) EXAMPLE: Evonik considers downstream risks due to climate change-related changes in precipitation extremes, such as droughts. A potential climate-related increase of droughts affecting our customers could lead to a reduction in demand for our products, because of disruption of production or substitution by more climate friendly products. There is no indication yet, that demand will be significantly affected in the near future. ii) INCLUSION IN RISK ASSESSMENT: Evonik observes climate-related downstream risks during our strategic business planning. Innovation projects are in place to offer state of art solutions and to gain competitive advantage, e.g. solutions reducing the emission of greenhouse gases. On the hand side the risk for substitution of existing products is continuously monitored by the accountable business manager. Relevant risks are reported to the Heads of the affected business unit and to the Corporate Risk Officer.</p>

C2.2d

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

i) MANAGEMENT PROCESS

RISKS and Opportunities:

Evonik has implemented a holistic and INTEGRATED RISK MANAGEMENT SYSTEM designed to ensure the continued existence and future target attainment of the Group through the early identification, assessment and treatment of risks. The Evonik risk management system is aligned to internationally recognized standards and principles such as the COSO ERM risk management standard.

All relevant risks worldwide, incl. climate change-related risks, are recorded and monitored at an early stage in our risk management system. We regard risks (opportunities) as negative (positive) deviations from projected or target values for potential future developments. The risks are monitored continuously by the risks owners while the risk portfolio is reviewed 4 TIMES A

YEAR by the Evonik Risk Committee. Our risk management process consists of risk identification, assessment, treatment, reporting as well as process monitoring and improvement. Risks, including climate-related risks are identified by risk owners in the operational divisions and functions, assessed according to their potential impact and likelihood. We assess risks using a mid-term perspective e.g. likelihood of occurrence based on a PERIOD OF 3 YEARS. Risks are classified in a 5x5 matrix of likelihood and potential qualitative and quantitative impact. The objective of risk control is to actively influence the risks that were determined within the scope of risk identification and assessment. Risk control must not be seen as an isolated process but, from an organizational aspect, must be integrated seamlessly into the existing management structure. Consequently, business responsibility and risk responsibility are often handled by one unit. Control measures are directed toward actively influencing the probability of occurrence and/or limiting the effect of risks. In many cases there will be a combination of different measures that can control a given risk appropriately. If measures and/or controls in the context of the internal control system are relevant for controlling a specific risk, these measures and controls are to be included in the risk report. Four times a year the Risk Committee is informed about the risk landscape and the status/progress of the single risks. Long-term risks are considered on a less detailed base during the strategic financial planning. Here the business managers, Corporate Strategy and Corporate Controlling model different risk scenarios for all business including defined material risks which could also be climate-change related.

ii) CASE STUDIES:

PHYSICAL Risk:

Assessing the risk of water stress due to climatic and demographic projections. In 2018 Evonik analyzed in cooperation with firstclimate the water quantity risk for the global production sites based on projections for climatic and demographic changes. During the project we analyzed the risk for 105 production sites for the next 20 years (esp. focusing on changes between 2020, 2030 and 2040). The assessment included the development and dependency between water availability, water need and water stress.

Evonik has used a variety of approaches with regard to its water quantity risk assessments in the past, with subsequent refinements focusing increasingly on Falkenmark and Lindh's basin scarcity criteria and the AWARE (available water remaining) method. The results identify a risk for certain sites until 2040 and the assessment and determination of measures is currently ongoing. A new activity oriented environmental target "Water" has been introduced and local water management systems are implemented. Overall Evonik is putting special effort in analyzing and mitigating risks at defined priority sites. Those sites have been identified in close cooperation with the business managers. The project is managed by Corporate ESHQ, Corporate Responsibility and the business units complemented with external consultants. The results have been reported to the respective managements and to the board. As stated measures have been agreed on and are now being implemented.

TRANSITIONAL RISK:

Regulatory risk from change of EEG law interpretation: The manager responsible for monitoring climate-related legislation identified the risk from the changed interpretation of the EEG law regarding capacity layer models in January 2017. Ahead of the release of the official interpretation the risk has been identified in close cooperation between Technology & Infrastructure, Political Communications and Legal. The risk was evaluated as unlikely in terms of likelihood and medium in terms of potential impact. The risk was then reported as an ad hoc

risk to the respective unit Heads, board members and Corporate Risk Officer. Based on a thorough analysis relevant measures to address the risk were derived and presented to the Board and other relevant bodies in order to achieve endorsement for the proposed path forward.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Increased pricing of GHG emissions

Type of financial impact

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

Company- specific description

i) CLEAR DESCRIPTION: Within the context of the Paris Climate Agreement becoming effective in 2016, changes in the national climate policies outside the EU can be observed. China already implemented a pilot system for emissions trading in seven provinces and started its nationwide system at the end of 2017. However, MUSC as the only ETS eligible site in China, is not affected by the national system and will stay in the regional Shanghai ETS. Singapore will implement a CO₂ tax in 2019 and Canada urges its provinces to implement a cap and trade scheme or a carbon taxation by 2018. Due to the election of a new president in the US, who is reluctant to climate protection, there is a lot of uncertainty regarding the energy and climate legislation there. However, states and municipalities continue or expand carbon pricing schemes. Whereas in the EU, the reform of the Emissions Trading System was agreed on in March 2018 and is connected with the attempt to initiate higher certificate prices by cutting the oversupply in the market as well as the free allocation. Since Evonik is a global operating company,

changes in the regions' national legislations would have direct as well as indirect effects on energy prices and on production costs of Evonik.

ii) EFFECT ON Evonik: Evonik operates 30 facilities that fall within the scope of the EU ETS. The plant in Kaba (Hungary) was shut down in the second quarter of 2018. A plant in Taavetti (Finland) was added as a result of the acquisition of the J.M. Huber silica business. An existing plant in Marl (Germany) was also included for the first-time following amendment of the Greenhouse Gas Emissions Trading Act (polymer production plants are now included in the EU ETS). The plants that fall within the scope of the EU ETS emitted 3.9 million metric tons of CO₂ in 2018 (2017: 3.8 million metric tons of CO₂). Considering this risk, the EU ETS could influence Evonik directly and indirectly, through our supply chain with regard to energy supply, as we expect the prices for our purchased energy to rise. Between 2019 and 2021, Evonik expects total costs of EUR 25 million due to the possible continuous tightening of the EU ETS. We assume an additional purchase effect on carbon certificates in the EU for Evonik of about EUR 70 Mio. in 2021–2030 when comparing the current free allocation rules with the rules of the fourth trading period.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

90,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

i) DESCRIPTION: The financial effects of the risk of cap and trade schemes or other CO₂ pricing models for Evonik depend a lot on the final legal regulations. Especially within the EU ETS, where the EU is eager to tighten the allocation rules and shorten the free surplus on the market, additional carbon costs are being expected. ii)

CALCULATION: Based on our current knowledge about the EU ETS reform for the fourth trading period (2021 – 2030), we assume an additional purchase effect on carbon certificates in the EU for Evonik of about EUR 70 million in 2021 – 2030 when comparing the current free allocation rules with the rules of the fourth trading period. We expect this impact to remain medium-low. After the carve-out of Steag in 2014 and

Carbon Black in 2011, our production significantly less energy-intensive and any energy cost increase has a much less significant impact on our overall cost position

Management method

To reduce the impact of increasing CO₂ costs Evonik is a) working on more energy-efficient processes and b) already shifted its portfolio to a less CO₂ intense business.

a) We constantly strive to make the provision of energy more efficient, improve energy generation still further, and optimize the structure of our integrated energy and management systems. Many of our sites have obtained, or aim to obtain, validation under ISO 50001. We have established many integrated structures linking chemical production and energy generation. For example, large amounts of steam generated in exothermic processes at various production facilities are supplied to other plants via steam networks. We managed to offset the increase in GHG emissions resulting from acquisition of the J.M. Huber silica business, for example by scaling back electrolysis at our site in Lüssdorf and by purchasing additional green certificates for the reduced power requirements at this site. In 2018, we invested €43 million (2017: €42 million) in measures to achieve a further improvement in environmental protection (+Operating costs for environmental protection facilities of €309 million in 2018.)

b) After the carve-out of Steag in 2014 and Carbon Black in 2011, our production is significantly less energy-intensive and any energy cost increase has a much less significant impact on our overall cost position Both carve-outs reduced the CO₂ emissions noticeably, e.g. STEAG produced 22 Mio. T CO₂ in 2013.

Cost of management

350,000,000

Comment

Evonik's present environmental targets are for the period until 2020 and the target reduction in specific greenhouse gases will be achieved before then. Therefore, we defined new environmental targets in the reporting period. We are aiming for an absolute reduction in scope 1 and 2 emissions of 50 percent by 2025, compared with the level in 2008 (status of implementation in 2018: 30 percent). This affirms Evonik's commitment to the Paris Agreement on Climate Change. The relatively short period up to 2025 reflects our view that it is not currently possible to predict technological and regulatory developments beyond this date with sufficient certainty. In future, internal CO₂ pricing will be an additional criterion in the management of major investments

By 2025 we aim to reduce our absolute greenhouse gas emissions by 50 percent compared with 2008 (reference base).

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

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

Type of financial impact

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

Company- specific description

Climate changes, especially precipitation, can cause flooding, high water or water shortages and thus have an effect on the availability of cooling water and transportation options. The aspect of transportation routes is of special relevance to Evonik. Many German sites are located on or near rivers. Because of this, large volumes of raw materials and products are transported to and from the sites by barge. Consequently, high and low water or climate-related frozen canals can have serious effects on Evonik's production. For example, the water level of the Rhine has effects on raw material availability for the Worms and Wesseling sites. Basically, this risk exists in Europe, Asia, North and South America and, hence, everywhere that Evonik is affected by the availability of river water.

Time horizon

Long-term

Likelihood

Unlikely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

30,000,000

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

The assessment of physical risks in terms of climate changes is fraught with uncertainty, as no reliable local climate models exist. Therefore, it is very difficult to make statements regarding the possible costs. For our calculation we assess the impact of past events and project those results to the estimated future business and climate development. According to our expectations and results from the past years we assess the risk resulting from chronic changes in precipitation patterns with 30 Mio. €.

Management method

Within the scope of Evonik's climate strategy, which has recently been further developed; extensive investigations of the 20 biggest sites are done. It is agreed that potential effects of climate changes on the sites and their production facilities be investigated from both logistics and raw material availability aspects. All sites also have emergency plans. These describe in detail what must be done at the site and in the neighborhood in case of incidents. Additionally, we have several insurances (property and business interruption insurances) which should cover most the potential costs. EXAMPLE: Regarding the lower Rhine level in 2018 an interdisciplinary group including delegates from affected businesses, logistics teams, procurement and insurance services defined and agreed on courses of action. Case studies for all affected sites have been carried out focusing on their special conditions (alternative routes, inventory level, transportation methods, critical raw materials). The results have been presented to the board and implemented measures helped to diminish a potential impact.

Cost of management

350,000,000

Comment

In 2018, we invested €43 million (2017: €42 million) in measures to achieve a further improvement in environmental protection (+Operating costs for environmental protection facilities of €309 million in 2018.)

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact

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

Company- specific description

Tropical cyclones, such as hurricanes and typhoons can shut down plants or affect production. This applies especially to sites near the coastline in North America and Asia (e.g. Japan). These cyclones can not only cause temporary disruptions to plants but can also cause weather-related interruptions in the supply chain. For example, Evonik operates several sites in affected areas in Asia, e.g. Yokkaichi, and the US, e.g. Garyville, Deer Park and Hopewell. Although preventive measures are implemented damage cannot be precluded.

Time horizon

Medium-term

Likelihood

Unlikely

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)

250,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The assessment of physical risks in terms of climate changes is fraught with uncertainty. Evonik Risk & Insurance Services GmbH is responsible for all of Evonik's insurances. These include business interruption and property damage insurance that provide compensation for at least some of the effects. An internal analysis of possible impacts of Hurricanes revealed that the impact of the inherent risk can be up to 250-500 million € (Medium-High).

Nevertheless, events of the last years showed working counter measures, that could lower the financial impact dramatically. For example, Evonik Oil Additives USA Inc. temporarily had to shut down its production in Deer Park, Texas due to Tropical Storm Harvey in 2017. This risk has been identified by the impacted business early and implemented measures helped to reduce emerging costs significantly. This and similar risks for our production sites worldwide are closely monitored and if appropriated covered by insurance

Management method

Within the scope of Evonik's climate strategy, which has recently been further developed; extensive investigations of the 20 biggest sites are done. It is agreed that potential effects of climate changes on the sites and their production facilities be investigated from both logistics and raw material availability aspects. All sites also have emergency plans. These describe in detail what must be done at the site and in the neighborhood in case of incidents. Additionally, we have several insurances (property and business interruption insurances) which should cover most the potential costs. Regarding the specific risks in 2015 an external analysis of our risk portfolio has been carried out. This analysis examines the specific risk for our sites arising from different climatic events such as typhoons or heavy rain. Together with internal and external experts preventing measures are examined and if appropriate implemented. Due to the

importance of this issue starting in 2019 the analysis will be done annually. Sites that belong to an identified risk group are extensively inspected by external consultants. For example, in 2018 different insurance providers carried out inspections focusing on flooding risks.

Cost of management

350,000,000

Comment

In 2018, we invested €43 million (2017: €42 million) in measures to achieve a further improvement in environmental protection (+Operating costs for environmental protection facilities of €309 million in 2018.)

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Customer

Risk type

Transition risk

Primary climate-related risk driver

Technology: Substitution of existing products and services with lower emissions options

Type of financial impact

Reduced demand for products and services

Company- specific description

A change in buying habits in terms of increased demand for climate-friendly products may lead to falling sales of existing greenhouse gas-intensive products. Evonik sells its products in different markets but is not involved in the area of end customer products. Therefore, changes in consumers' buying habits have an effect on the portfolio and the sales of the end customer industries. However, this has an effect on the products that Evonik sells to companies in these industries. For example, increased use of bio-fuels or other alternative drive systems for cars, especially considering the rising importance of e-mobility, could result in lower sales of MTBE.

Time horizon

Long-term

Likelihood

Unlikely

Magnitude of impact

Medium-low

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)

10,000,000

Potential financial impact figure – maximum (currency)

100,000,000

Explanation of financial impact figure

At present, the financial effects can be estimated only to a limited extent. The focus of Evonik's risk management system is the planning period of the next three years. However, changes in consumer behavior are more long-term and therefore to be expected beyond this timeframe. Based on current planning, it can be assumed that the cumulated effect would have significant effects on Evonik in the coming years. Hence, we assume an impact of 50 to 100 million €.

Management method

As an innovative industrial group, by developing new products Evonik ensures the success of its customers and, consequently, its own long-term and profitable growth. We are constantly working on our portfolio to safeguard future success. We identified megatrends and focus on our four growth engines: Health & Care, Smart Materials, Specialty Additives and Animal Nutrition. To foster the realization of the identified opportunities and to mitigate risks regarding the substitution of existing products we focus on these drivers regarding internal R&D as well as acquisitions. Examples of the last years are the acquisitions of APD Special Additives, Huber Silica or Dr Straetmans amounting to an investment of about 4 billion EUR.

Cost of management

4,000,000,000

Comment

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Increased pricing of GHG emissions

Type of financial impact

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

Company- specific description

The German Renewable Energy Sources Act (EEG) establishes a monetary support scheme for renewable energy investments and provides for the payment of a levy by electricity consumers to finance this budget. The EEG includes also provisions that exempt certain electricity consumption from the levy or limit the levy for companies whose markets are affected by international competition. Electricity that is self-produced in existing power plants is mainly exempted from the EEG levy. This exemption was reviewed by the German government in 2016 and notified by the European Commission in 2017. Evonik operates a couple of on-site power plants for the production of steam and electricity mainly based on cogeneration (CHP) in Germany. Additionally, some group companies benefit from a limitation of the EEG levy. An amendment of the EEG regarding the exemption or limitation of the EEG levy as well as a changed interpretation of the EEG could be detrimental to Evonik. Evonik in Germany operates a couple of on-site power plants for the production of steam and electricity, mainly based in cogeneration

Time horizon

Long-term

Likelihood

Unlikely

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

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

Due the large degree of uncertainty regarding the quality and type of possible modifications neither the likelihood nor the impact / potential financial burden can be reasonably estimated

Management method

To reduce the impact of increasing CO₂ costs Evonik is a) working on more energy-efficient processes and b) already shifted its portfolio to a less CO₂ intense business.

- a) We constantly strive to make the provision of energy more efficient, improve energy generation still further, and optimize the structure of our integrated energy and management systems. Many of our sites have obtained, or aim to obtain, validation under ISO 50001. We have established many integrated structures linking chemical production and energy generation. For example, large amounts of steam generated in exothermic processes at various production facilities are supplied to other plants via steam networks. We managed to offset the increase in GHG emissions resulting from acquisition of the J.M. Huber silica business, for example by scaling back electrolysis at our site in Lülldorf and by purchasing additional green certificates for the reduced power requirements at this site. In 2018, we invested €43 million (2017: €42 million) in measures to achieve a further improvement in environmental protection (+Operating costs for environmental protection facilities of €309 million in 2018.)
- b) After the carve-out of Steag in 2014 and Carbon Black in 2011, our production is significantly less energy-intensive and any energy cost increase has a much less significant impact on our overall cost position Both carve-outs reduced the CO₂ emissions noticeably, e.g. STEAG produced 22 Mio. T CO₂ in 2013.

Cost of management

350,000,000

Comment

Evonik's present environmental targets are for the period until 2020 and the target reduction in specific greenhouse gases will be achieved before then. Therefore, we defined new environmental targets in the reporting period. We are aiming for an absolute reduction in scope 1 and 2 emissions of 50 percent by 2025, compared with the level in 2008 (status of implementation in 2018: 30 percent). This affirms Evonik's commitment to the Paris Agreement on Climate Change. The relatively short period up to 2025 reflects our view that it is not currently possible to predict technological and regulatory developments beyond this date with sufficient certainty. In future, internal CO₂ pricing will be an additional criterion in the management of major investments

By 2025 we aim to reduce our absolute greenhouse gas emissions by 50 percent compared with 2008 (reference base).

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Evonik offers its customers environment-friendly and energy-efficient systems solutions. In view of the limited reserves of fossil fuels, we see this as a major source of opportunities. One example is precipitated silica, where we are a market leader. Precipitated silica is used in combination with silanes to produce tires with low rolling resistance that reduce fuel consumption. We are the only manufacturer worldwide that can offer the tire and rubber industries both components required for tires with low rolling resistance, i.e. silica and silanes. Moreover the addition of the amino acid DL-methionine to animal feed makes an important contribution to all three dimensions of sustainability – environmental, economic and social. Independent studies confirm that the addition of DL-methionine to feed significantly decreases greenhouse gas emissions as well as reducing the amounts of water and land that are required for animal nutrition

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-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)

150,000,000

Potential financial impact figure – maximum (currency)

300,000,000

Explanation of financial impact figure

The financial effects of this opportunity for Evonik depend a lot on the final legal regulations. Therefore, at this time it is not really possible to make a reliable estimation. Additionally, changes in statutory regulations are more long-term and therefore to be expected beyond our planning timeframe. It can be assumed that the cumulated effect would have significant effects on Evonik in the coming years. Based on our current knowledge, we assume effects in the region of €150-300 million.

Strategy to realize opportunity

As an innovative industrial group, by developing new products Evonik ensures the success of its customers and, consequently, its own long-term and profitable growth. With a balanced innovation pipeline we have answers for the main megatrends that we have identified. Resource efficiency has been identified as a major megatrend. Evonik markets a variety of products whose use makes a positive contribution to reducing greenhouse gas emissions compared with conventional alternatives. The avoidance of greenhouse gases shown here results from applications for the following four products/system solutions: "green" tire technology, amino acids for animal nutrition, foam stabilizers for insulating materials, and oil additives for hydraulic fluids. To fulfill its customers' wishes in terms of product sustainability, Evonik formed the Life Cycle Management Group. It sees itself as a neutral and strategic partner in the field of sustainability and supports the company's activities in this direction in many ways with its cross-section function. On product and process levels, the LCM Group supports Evonik's business lines in the implementation of life cycle assessments (LCA). A large part of Evonik's product portfolio has already been investigated and analyzed. The Carbon Footprint Estimation (CFE) model is a standardized and externally tested method that was developed to assess innovations in extremely early phases of the projects.

Cost to realize opportunity

459,000,000

Comment

Our innovation pipeline addresses completely new business options as well as activities to secure and enhance the prospects of existing business operations. Alongside product and process innovations, the focus includes innovative business models and product and process innovations. Our project portfolio is aligned to the differing strategies of the various business entities.

R&D expenses amounted to € 459 million in 2018 as a result of target-oriented management aiming at the realization of future business opportunities.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Type of financial impact

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

Company-specific description

Evonik has identified resource efficiency as a future megatrend and therefore also as a growth area and sees business opportunities from rising demand for existing and new climate protection products. For example, in 2008 the EU Commission decided that the car manufacturers' fleets may not emit more than 130 g CO₂ per kilometer on average by 2015. Evonik already makes a contribution towards making automobiles more and more environmentally friendly. With silanes and silica for green tires, catalysts for biodiesel production, oil additives or high-performance polymers, Evonik helps contain climate change. It is also forecast that there will be a worldwide increase in demand for biodiesel in the coming years – also because of legal requirements. For example, the European Union has decided that in 2020 10% of fuel requirements in the transportation sector must be covered by renewable resources. Evonik is one of the leading companies in the field of catalyst production for biodiesel production. For example, the use of sodium methylate as a catalyst produces higher yields in biodiesel production and thus conserves resources.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-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)

150,000,000

Potential financial impact figure – maximum (currency)

300,000,000

Explanation of financial impact figure

At present, the financial effects can be estimated only to a limited extent. The focus of Evonik's risk management system is the planning period of the next three years.

However, changes in the climate are more long-term and therefore to be expected beyond this timeframe. Consequently, it is difficult to make a precise forecast. It can be assumed that the cumulated effect would have significant effects on Evonik in the coming years. Based on our current knowledge, we assume effects in the region of €150-300 million.

Strategy to realize opportunity

As an innovative industrial group, by developing new products Evonik ensures the success of its customers and, consequently, its own long-term and profitable growth. With a balanced innovation pipeline we have answers for the main megatrends that we have identified. Resource efficiency has been identified as a major megatrend. Evonik markets a variety of products whose use makes a positive contribution to reducing greenhouse gas emissions compared with conventional alternatives. The avoidance of greenhouse gases shown here results from applications for the following four products/system solutions: "green" tire technology, amino acids for animal nutrition, foam stabilizers for insulating materials, and oil additives for hydraulic fluids. To fulfill its customers' wishes in terms of product sustainability, Evonik formed the Life Cycle Management Group. It sees itself as a neutral and strategic partner in the field of sustainability and supports the company's activities in this direction in many ways with its cross-section function. On product and process levels, the LCM Group supports Evonik's business lines in the implementation of life cycle assessments (LCA). A large part of Evonik's product portfolio has already been investigated and analyzed. The Carbon Footprint Estimation (CFE) model is a standardized and externally tested method that was developed to assess innovations in extremely early phases of the projects.

Cost to realize opportunity

459,000,000

Comment

Our innovation pipeline addresses completely new business options as well as activities to secure and enhance the prospects of existing business operations. Alongside product and process innovations, the focus includes innovative business models and product and process innovations. Our project portfolio is aligned to the differing strategies of the various business entities.

R&D expenses amounted to € 459 million in 2018 as a result of target-oriented management aiming at the realization of future business opportunities.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resilience

Primary climate-related opportunity driver

Other

Type of financial impact

Increased reliability of supply chain and ability to operate under various conditions

Company-specific description

Evonik production facilities worldwide are based on modern standards and have high levels of occupational and environmental safety, so we see opportunities to further increase our market shares. For instance, in 2017 there was an increase in shutdowns of production facilities in China, including those operated by our competitors, to improve environmental protection and occupational safety.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

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

At present, the financial effects can be estimated only to a limited extent. The point in time of changes in legislation cannot be anticipated exactly. After the increase of shutdowns in 2017 we assume opportunities in the short-term with a significant effect on in Evonik in the coming years.

Strategy to realize opportunity

The basis for our actions is an extensive, integrated management system for the environment, safety, health, and quality that applies to the whole of the Evonik Group. The structure of the management system is based on legal requirements and internal regulations such as policies and standard operating procedures. That ensures that we meet compliance requirements and supports continuous improvement of our environmental performance.

. In 2018, we invested €43 million (2017: €42 million) in measures to achieve a further

improvement in environmental protection. Investment in environmental protection can fluctuate considerably because it depends on specific projects. The increase in 2018 was principally due to the increase in production capacity for fumed silica in Antwerp (Belgium). Operating costs for environmental protection facilities decreased slightly to €309 million in 2018 (2017: €310 million), mainly as a result of the divestment of the site at Jayhawk (USA) and shutdown of the site in Kaba (Hungary).

Cost to realize opportunity

310,000,000

Comment

C2.5

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

	Impact	Description
Products and services	Impacted	<p>Products and services</p> <p>DESCRIPTION OF IMPACT/RATIONALE: This area of our business has impacted large parts of our businesses SINCE we aligned our business strategy years ago directing at a more sustainable portfolio targeting the realization of opportunities deriving from climate change and respective changes in markets. Overall, we registered a high demand for our products resulting in higher sales. Large examples can be found especially in our segments Nutrition & Care and Resource Efficiency.</p> <p>Example 1: Feed Additives: Our business line Animal Nutrition sells essential amino acids as feed additives from several world scale production plant globally. Our essential amino acids, such as Methionine and Lysine, allow an efficient way to feed livestock. Less farmland to grow livestock feed such as soy is needed. Farming causes nearly a quarter of global greenhouse gas emissions, Evonik's Business Line Animal Nutrition supports the livestock industry in making significant progress by boosting efficiency, output and animal health while at the same time contributing to sustainability by reducing emissions to air, land and water. The importance is underlined by this year's opening of an additional Methionine plant in Singapore. investing more than 500 Mio. EUR.</p> <p>Example 2:</p> <p>Evonik is the only producer and supplier of silica-silane reinforcing systems for the rubber industry.</p> <p>The use of silica-silane reinforcing system is the key-solution enabling the production of low-rolling resistance tires, environmentally friendly "Green Tires". "Green tires" reduce rolling resistance leading to lower fuel consumption by 5% caused by the tire, without deterioration of other properties, such as tread wear. As a result, 1,4 t CO₂ emissions can be saved at a distance of 150.000 km. This is an important product for</p>

		<p>Evonik, which is underlined by a recently opened additional plant in Charleston, USA, investing 120 Mio. USD.</p> <p>MAGNITUDE OF IMPACT: The realization of opportunities arising from climate change is a major driver in our strategy, therefore the share of business seizing climate change opportunities is large. Accordingly, the impact of our climate change-related opportunities is very high.</p>
Supply chain and/or value chain	Impacted	<p>DESCRIPTION/RATIONALE: This area of our business is partly impacted BECAUSE we have identified climate change-related physical risks, such as an increase of extreme weather events like droughts or hurricanes that could disrupt our supply chain. During the last year a severe drought in central Europe resulted in low Rhine water levels that disrupted large parts of important channel transportation, and led to disruption of production in all parts of the Supply Chain based alongside the river or increased transportation costs.</p> <p>This risk has been identified by the impacted business early and implemented measures helped to reduce emerging costs significantly. This and similar risks for our production sites worldwide are closely monitored and if appropriated covered by insurance. A group-wide project to analyze the risk of water scarcity is implemented as stated in 2.2d (water stress).</p> <p>Additionally the last years were dominated by very volatile procurement markets. The reasons for this included, among others, the Chinese government's tougher stance on environmental policy. This led to unforeseeable production stoppages in the supply chain and global price rises in some procurement markets. We are aware of our responsibility within the supply chain. Issues such as safety, health, environmental protection, corporate responsibility, and quality play an integral part in our procurement strategy.</p> <p>MAGNITUDE OF IMPACT: Because of an early identification of those types of risks and implemented mitigation measured that proved to be effective the magnitude of impact is considered low.</p>
Adaptation and mitigation activities	Impacted	<p>DESCRIPTION OF IMPACT/RATIONALE:</p> <p>This area of our business is impacted BECAUSE the basis for our actions is an extensive, integrated management system for the environment, safety, health, and quality that applies to the whole of the Evonik Group. The structure of the management system is based on legal requirements and internal regulations such as policies and standard operating procedures. That ensures that we meet compliance requirements and supports continuous improvement of our environmental performance. In 2018 we invested 43 Mio. EUR (2017: 42 Mio. EUR) in measures to achieve a further improvement in environmental protection. In 2018, for example, a major investment for environmental protection was connected to the capacity expansion of our plant for fumed silica in Antwerpen,</p>

		<p>Belgium. In 2017, for example, a more effective wastewater treatment facility was constructed in Zubillaga (Spain) and a new thermal incineration plant was built in Marl (Germany). Operating costs for environmental protection facilities were stable at 309 Mio. EUR in 2018</p> <p>MAGNITUDE OF IMPACT</p> <p>Overall, climate-related risks and opportunities are important drivers of adaptation and mitigation activities. Accordingly, the impact of our climate change-related opportunities and risks on our adaptation and mitigation activities is high.</p>
Investment in R&D	Impacted	<p>DESCRIPTION OF IMPACT/RATIONALE: This area of our business is impacted BECAUSE major R&D projects focus on solutions for a more sustainable future. This said Sustainability is defined as a growth driver and spendings in the last and coming years are affected by climate change opportunities. The good market development of new products with specific sustainability benefits is gratifying. At in-cosmetics, the global trade show for the cosmetics industry in Paris, our Care Solutions business (Nutrition & Care segment) received an award for RHEANCE® One, a glycolipid cleansing agent for skin and hair. This new development is produced from sugar using a fermentation process without tropical oils. The Veramaris joint venture that grew out of the successful research collaboration between Evonik's Nutrition & Care segment and DSM produces omega-3 fatty acids from algae. The aim is to meet 15 percent of annual demand from the salmon industry for the omega-3 fatty acids EPA1 and DHA2 with algal oil. So far, wild fish stocks have been the main source of algal acid. The construction of a production facility in Blair (Nebraska, USA) is proceeding on schedule and commercial quantities of algal oil will be available in mid-2019. Examples of new sustainable products from our Resource Efficiency segment included POLYVEST ST®, an additive used in combination with silica and silanes that helps achieve a further significant reduction in the rolling resistance of tires and thus reduces fuel consumption and CO2 emissions. CALOSTAT®, a high-performance insulating material based on silicon dioxide, won the German Design Council's German Innovation Award 2018 in the category Building & Elements. Since the start of 2018, Evonik and Siemens have been working together on the Reticus project on artificial photosynthesis. Renewable materials and bacteria are converted into valuable specialty chemicals with the aid of carbon dioxide. A first pilot plant is under construction at our site in Marl (Germany). It will produce chemicals such as butanol and hexanol from 2021.</p> <p>MAGNITUDE OF IMPACT: R&D spendings at Evonik amounted to 459 Mio. EUR in 2018 more than 60% are spend in segments focusing on sustainable nutrition or resource efficiency. Consequently, the magnitude of impact is considered high.</p>

Operations	Impacted	<p>DESCRIPTION OF IMPACT/RATIONALE:</p> <p>Operating costs for environmental protection facilities amount to around 300 Mio. EUR per year.</p> <p>By raising global capacity for precipitated silica, the Resource Efficiency segment is supporting the growth of its global customers in the tire and construction industries and in attractive specialty markets. Precipitated silica is a fast-growing product, that is mainly used in high-quality tires with low rolling resistance. Moreover, Nutrition & Care invested a high double digit million-euro amount in the construction of a new production plant for specialty silicones in Shanghai (China). As polymer additives, they ensure comfortable upholstered furniture, auto seats, and ergonomic mattresses. They also play an important part in formulations for insulating materials for buildings and ensure the energy efficiency of refrigerators</p> <p>MAGNITUDE OF IMPACT: Considering yearly investments and operating costs for environmental protection which include climate change related spendings the impact is considered high.</p>
Other, please specify	Impacted	<p>Acquisitions: As part of the ongoing development of our corporate strategy, we have defined four strategic growth engines within our Nutrition & Care and Resource Efficiency growth segments: Specialty Additives, Animal Nutrition, smart Materials, and Health & Care. To improve the growth momentum of the Evonik Group, we intend to focus our acquisitions and research and development expenses on these growth engines, which have particularly promising prospects in our view. The acquisitions of the specialty additives business of Air Products and Chemicals Inc. and the silica business of J. M. Huber Corporation are an ideal fit to those growth fields. Both acquisitions amounting to an investment of about 4 billion EUR support business areas focusing on resource efficiency and consequently, offering solutions that help saving emissions such as Carbon Dioxide.</p> <p>Magnitude of Impact: Regarding the purchase prices the magnitude of impact is considered high.</p>

C2.6

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

	Relevance	Description
Revenues	Impacted	<p>DESCRIPTION OF IMPACT/ RATIONAL:</p> <p>This area of financial planning has already been impacted BECAUSE identified climate change related opportunities have already been realized. As preconditions for Evonik's future viability, sustainable business activities and responsible conduct are cornerstones of our business model. We drive forward our sustainability activities along</p>

		<p>the value chain in close dialogue with our stakeholders. As well as our own production processes and the products we market, we always consider the supply chain and the product benefits for our customers and their customers. We have observed rising demand for products that demonstrate a good balance of economic, ecological, and social factors. That opens up a broad spectrum of future-oriented business opportunities for Evonik in attractive markets. Sustainability has long been a growth driver in many of our business. Evonik has defined growth engines with a clear focus on. For example, the Resource Efficiency segment supplies high performance materials for environmentally friendly as well as energy-efficient systems to the automotive, paints & coatings, adhesives, construction, and several other industries.</p> <p>Resource efficiency is the basis for energy-efficient and environmentally compatible products and is therefore a key factor in the development of this segment's business. With the Silica/Silane-technology from Evonik in treads, gas-guzzling rolling resistance decreases while traction and wet grip are simultaneously increased. This decreases fuel consumption by up to 8% . IMPACT: Our sales in those areas of business supporting energy efficient and sustainable solutions we have seen increasing demand. For example, the revenue of Resource Efficiency increased from 4040 Mio. € in 2014 to 5709 Mio. € in 2018 by above 40%. Reasons are for instance higher standards for bio-fuel or regulations for more energy efficient tires. The magnitude of impact for opportunities from climate change related changes in customer behavior and/or regulation is assessed as very high.</p>
Operating costs	Impacted	<p>DESCRIPTION OF IMPACT/ RATIONAL:</p> <p>This area of financial planning has been impacted BECAUSE the identified regulatory risks as well as physical risks haven been considered in our forecasts for energy and transportation costs. Those costs are part of our regular financial planning and forecasting processes and approved by the board in course of the financial forecast (current year)/ mid-term planning (one to three years)/strategic planning (10 years). Relevant in this topic are e.g. direct and indirect risks from current or emerging regulation deriving from discussion about rising CO2 prices especially within the EU and acute physical condition like a seasonal lower water level of the river Rhein. Regarding the first example the main regulatory framework is the EU Emissions Trading Scheme (ETS) that triggers risks for the European industry. The ETS could affect Evonik directly, through our own energy generation facilities that are part of the EUR ETS as well as indirectly, through higher costs in our supply chain. Current trends</p>

		<p>show constantly rising prices; thus risks are relevant as of today. Regarding acute physical risks our supply chain is affected by lower Rhine levels through either higher transportation costs for alternative shipping routes or freight trains as well as through a declining availability of raw materials because of production and shipping bottlenecks.</p> <p>IMPACT: Because of the sale of STEAG and the Carbon Black Business as well as the current sale of the Methacrylates business Evonik's dependence on energy prices is declining. Nevertheless, we see medium-low risks regarding EU ETS regulation and for lower Rhine levels.</p>
Capital expenditures / capital allocation	Impacted	<p>DESCRIPTION OF IMPACT:</p> <p>In our financial planning process capital expenditure/capital allocation is impacted in all segments, BECAUSE the opportunities and risks we have identified and reported in this CDP report have already been part of strategic decision making. During our yearly planning processes all segments develop in cooperation with Corporate Strategy expenditure plans with main focus on single projects. Here Evonik strategic goals such as the reduction of CO2 footprint as well as financial targets are important guidelines in decision making. The CapEx planning focuses on long-term projects with a mandatory time horizon of min. ten years. The CapEx budget is approved during the midterm planning process. Large CapEx projects are approved individually by the executive and supervisory board. Several projects have already been initiated either to mitigate risks or to foster opportunity arising from transitional as well as acute physical risks. For example, the risk of rising prices for EEG-Umlage and political as well as economic risks related to coal plants led to focus on re-building our energy park in Marl, Germany. To take advantage of the opportunity to fully participate from subsidies and mitigate risks regarding carbon pricing in Europe and emerging/ existing regulation regarding coal energy plants ("Kohleausstieg") we already switched one carbon block to Gas and Vapor in 2016 which is more energy efficient and causes less maintenance costs. To save additional 1 Mio. t CO2 emissions per year two more carbon blocks in Marl will be replaced by 2022.</p> <p>Another example showing how we seize opportunities is our investment in a larger silica production capacity in response to high demand within the tire industry. The company will increase its annual production capacity for precipitated silica at the existing site in Adapazari (Turkey) by 40,000 tons, investing a sum in the lower double-digit million-euro range. Evonik operates a joint venture in Turkey. Startup of the new production complex is scheduled for 2020. In addition to producing ULTRASIL rubber silica, it will also serve the</p>

		<p>growing needs for precipitated silica.</p> <p>IMPACT: Climate change is one of many aspects influencing our decision making on new CapEx projects. Overall Evonik spent CapEx of 1.050 Mio. € in 2018, the quota of projects affected by climate change risks and opportunities is high.</p>
Acquisitions and divestments	Impacted	<p>DESCRIPTION/RATIONALE: This area has been impacted strongly BECAUSE climate related risks/opportunities have been a major factor influencing especially divestment decisions. After the carve-out of Steag in 2014 and Carbon Black in 2011, our production is significantly less energy-intensive and any energy cost increase has a much less significant impact on our overall cost position. On the other hand sight acquisition decisions consider sustainability and the coherence to our sustainability strategy. Recent acquisitions such as the specialty additives business of Air Products and Chemicals Inc. and the silica business of J. M. Huber Corporation amounting to four billion EUR as well as on going acquisitions such as PeroxyChem reflect our approach.</p> <p>Climate change is one of many aspects influencing our decision making on acquisition/divestment projects. Overall the quota of projects affected by climate change risks and opportunities is high.</p>
Access to capital	Not yet impacted	<p>DESCRIPTION/RATIONALE:</p> <p>The access to capital is not yet impacted. During our yearly financial planning we assess our capital needs and potential risks and opportunities regarding the availability and price of capital and have not yet identified and reported significant influence on the access to capital for climate change reasons and we do not expect changes in the foreseeable future. Trends like sustainable finance are not considered as risk or opportunity during the next years. Because of the carve-out of STEAG and Carbon black in the past years, and the current divestment of the "Madrid"-business our dependence on energy prices has sharply declined.</p>
Assets	Impacted	<p>This area of financial planning is impacted BECAUSE we identified climate change-related risks regarding acute and/or chronical physical risks that could impact our assets. For example, acute physical risks such as hurricanes esp. affecting the gulf of Mexico could negatively affect our assets located around the coastline. Changes in precipitation patterns could lead to (seasonal) draughts affecting either transportation routes (e.g. lower Rhine level esp. affecting our site in Marl, Germany) or water availability, e.g. for production.</p> <p>IMPACT: A task force analyzed changing water stress scenarios for the next 20 years for 105 Evonik sites. The magnitude of impact for water scarcity is assessed as low. The magnitude of impact for acute physical risks is expected to be medium.</p>

Liabilities	Not yet impacted	DESCRIPTION/RATIONALE: This area of financial planning process is not impacted BECAUSE we are not aware of any liabilities that have been influenced by climate change aspects in the past and we do not expect any impact of climate change-related aspects on liabilities in the future. None of the risks or opportunities we have identified and reported in this CDP report have an impact on our liabilities. Trends like sustainable finance are not considered as risk or opportunity during the next years.
Other		

C3. Business Strategy

C3.1

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

Yes

C3.1a

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

Yes, qualitative and quantitative

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

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

No, we do not have a low-carbon transition plan

C3.1c

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

- Process:

Climate change is an essential component of Evonik's strategy. At Group level Evonik interlinks its business strategy with its sustainability strategy, where climate change represents an important pillar. This includes consideration of sustainability in the strategic assessment of individual transactions and specific investment decisions. At Group level, Evonik had set itself the goal to reduce specific CO₂ emissions, H₂O consumption and waste by 20% by 2014 compared to 2004. As these goals have been fulfilled by end 2012 new goals were developed

and approved by the Evonik board. They comprise a 12 % reduction of specific CO₂ emissions and a 10 % reduction of specific H₂O consumption by 2020 compared to 2012 figures. Additionally Evonik will continuously strive to further reduce production related waste. The Evonik segments and business lines discuss climate topics and their relevance for business area development within the scope of the annual strategy process. Opportunities and risks that are identified from climate change flow into the strategic alignment of the individual business lines. Evonik has started the Evonik Sustainability Business Forum initiative in 2012 to deepen the dialogue with external stakeholders. In this event key challenges for society and industry resulting from the depletion of resources and possible strategies and solutions for the challenges have been discussed intensively. Meanwhile targetting a broader external stakeholder audience Evonik started 2014 a process to monitor and implement a membership at CSR Europe.

- Aspects influencing strategy:

Climate change offers Evonik growth opportunities. In various business lines Evonik provides solutions in the form of products and services for sustainability and climate protection. Evonik also strives to minimize the company's manufacturing costs and carbon footprint by using processes that conserve energy and resources. As customers do ask for more low-carbon products beginning 2018 Evonik decided to develop new environmental goals considering absolute reductions for GHG's. These new goals were put in place by the board of Evonik in February 2019.

- Short term strategy changes:

The company reviews savings potentials in regard to CO₂ and energy for all plants. For this purpose, within the scope of the current EEM+ process (Energy Efficiency Management) Evonik sites (>80 worldwide) are investigated and assessed regarding energy savings potentials and the associated potential reductions in CO₂ emissions. The experts in Evonik's SEEC unit (targeting operational excellence issues) are responsible for this. Evonik has implemented an SAP based sustainability reporting system ("SuRe") used by all Evonik sites. In 2012 it was decided to add an additional reporting position on energy savings and CO₂ equivalents saved. The results are monitored by C-ER on corporate level. To further increase performance and transparency in terms of climate change, Evonik's communication strategy has been extended with participation in the CDP project. In this context Evonik's carbon footprint for 2012 was measured and assessed according to GHGP in 2013. In 2014, Evonik was included in the stock market indexes for responsible investment, FTSE4Good Global and STOXX® Global ESG. STOXX Limited lists the company in the Global ESG Leaders index.

- Long term strategy changes:

Evonik has aligned its long-term business strategy to the global megatrends of health and nutrition, resource efficiency and globalization. Evonik's focus is on growth areas for which climate protection is an important driver. Evonik has already established itself as a provider of B2B solutions for energy efficiency and climate protection. The long-term business strategy also includes the consistent alignment of the innovation strategy to these growth areas and preferred capex allocation in identified growth businesses that profit from climate protection.

- Strategic advantage:

Evonik is a key player in the area of climate protection solutions. Examples of this are Evonik products and technologies for resource-conserving animal feed, for environmentally friendly paints and insulation materials and for the areas of lightweight construction, solar and wind energy and geothermal energy. From its strong positioning as a market and technology leader

in these growth areas, Evonik derives a strategic advantage and the prospect of above-average growth. Through energy-efficient and resource-conserving processes Evonik also optimizes its cost position in competition with other providers.

- Business Decisions:

Evonik also makes numerous specific investments in businesses/products whose markets are driven by climate change. For the reporting year 2018 the most prominent example to be mentioned is the significant transition of the energy infrastructure at our largest production site in Marl, Germany. The three digit million investment will result in a fuel switch from coal to gas combined with the installation of new gas combined cycles power plants. Site CO₂-emissions will be reduced between 30 and 40%. A major driver for the decision is the significant reduction of CO₂-emissions thus reducing Evonik's dependency from the EU trading scheme and reducing efforts for risk management on the one hand. On the other hand Evonik will be able to offer low-carbon steam and electricity to third parties located in Marl as requested. And finally improving Evonik's carbon footprint by reducing CO₂-emissions from energy conversion activities.

C3.1d

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

Climate-related scenarios	Details
2DS	Climate scenarios at Evonik are understood as a range of possible outcomes by considering a variety of alternative possible futures. They challenge conventions about the future, as they are constructed for exploring alternative situations. Climate scenarios can therefore be used to assess the probability of reaching or overshooting targets as well as quantifying the likelihood of risks and opportunities for the business. Plans can then be developed to ensure that the business is ready for the transition to a low carbon future. In addition scenario analysis can give detailed information on potential vulnerability within the value chain e.g. impacts on rawmaterial transport to sites. Evonik has already started to implement climate change scenarios according to the TCFD framework to make use of the following advantages: Businesses analysis that is flexible or robust for a range of futures. Understanding of the strategic implications of climate related risks and opportunities. In this context Evonik considers two types of scenario analysis: Physical – using the results of global climate models that forecast the Earth's response to changes in the concentrations of GHGs in the atmosphere to understand the impact on business operations. Transitional - scenarios present assumptions about the climate policies and deployment of low carbon technology to limit GHG emissions. They draw conclusions by modelling how policy and energy supply related technology will interact with economic activity, energy consumption and GDP as well as other factors. Based on Evonik's extensive analyses of all 105 production sites (including acquisitions in 2017/18) long-term projections on water demand and water availability for 2030 and 2040 were designed in 2018. This is aimed to reflect the crucial role of water in chemical operations on the one hand and water (availability) being the primary natural capital to be impacted by

	<p>climate change. Summing up, based on the scenario analysis and our accompanying analyses we cannot exclude significant changes in water availability at one quarter of all sites due to climate change in the next 20-30 years to have the potential to generate substantive negative change in our costs or revenues. IMPACT ON OBJECTIVES/STRATEGY: Taking into consideration the results of our scenario analysis we decided to develop water emergency management plans for sites located in water stressed areas. Special attention will also be paid to sites located at the river rhine in Germany as transportation had to be stopped in summer 2018 due to low water. Alternatives like rerouting via train transport instead of shipping have to be explored instead, which actually took place for our sites located at the rhine river. In addition, we are investigating further potential ways to lower greenhouse gas emissions not just for Evonik but also along the value chain, i.e. new CO2-reduction targets for scope1, scope2 and scope3 emissions. These new targets have been approved by the members of the Board beginning 2019 and will be presented next year.</p> <p>Analysis Summary: •Existing designated water scarce Evonik production sites do not see significant changes w.r.t. basin water supply. •Changes in water supply due to climate change projections do not appear to be a major driver of water scarcity in the future</p> <p>Water Demand Summary: •Most existing designated water scarce Evonik production sites will see increases in water demand implying greater competition for remaining water resources in the future due to stable or decreasing water stocks •Changes in water demand due to projected socio-economic factors appear to drive most of the future water scarcity for Evonik production sites Water Stress Summary: •Most Evonik production sites already designated as water scarce will see increases in water stress or no change from present conditions .</p> <p>All sites in water stressed areas are subject to special attention by the risk management effective 2018/2019</p>
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C4. Targets and performance

C4.1

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

Intensity target

C4.1b

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

Target reference number

Int 1

Scope

Scope 1 +2 (market-based)

% emissions in Scope

100

Targeted % reduction from base year

12

Metric

Metric tons CO₂e per metric ton of product

Base year

2012

Start year

2013

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

0.72

Target year

2020

Is this a science-based target?

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

% of target achieved

100

Target status

Achieved

Please explain

This target has already been reported in last year's CDP Report. Based on the target achievement earlier than originally planned (2020) Evonik decided to strive for a new set of climate related KPI's starting in 2019 with target year 2025.

% change anticipated in absolute Scope 1+2 emissions

6

% change anticipated in absolute Scope 3 emissions

0

C4.2

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

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	7	
To be implemented*	3	5,000
Implementation commenced*	5	800
Implemented*	15	13,720
Not to be implemented	45	

C4.3b

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

Initiative type

Energy efficiency: Processes

Description of initiative

Process optimization

Estimated annual CO₂e savings (metric tonnes CO₂e)

8,000

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

15,000

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

30,000

Payback period

1-3 years

Estimated lifetime of the initiative

3-5 years

Comment

10 different measures increasing the process efficiency like "Natural gas Minimum flow reduction"

Initiative type

Energy efficiency: Building services

Description of initiative

Other, please specify

A basket of 5 different measures like lighting to decrease Scope 2 emissions

Estimated annual CO2e savings (metric tonnes CO2e)

5,700

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

300

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

800

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

e.g. Installation of LED Bulbs

C4.3c

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

Method	Comment
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Financial optimization calculations	The payback period is generally set at 1-5 years. Measures with longer payback periods are kept back and re-assessed at a later date.
Internal price on carbon	New Investments and acquisitions are calculated against a Price of carbon which depends on the global Region. Speaking generally Evonik expects a world-wide Price on carbon by about 50€ within the next 10 years. Prior to this, price development may vary Region-/Country-wise and is taken into consideration.
Internal incentives/recognition programs	Each year, Evonik Industries presents the Innovation Award, which recognizes the most successful researchers in the Company, either by recognizing the development of new products/systems or new and improved processes resulting in lowering emissions or reduced energy consumption. Recognition is an important driver of creativity. This is why working on new ideas at Evonik Industries is richly rewarded in such a variety of ways. To motivate our most creative minds in research and development, for example, we have an internal Innovation Award, which is presented annually to acknowledge outstanding research achievements worth €30.000. Evonik's Innovation award is part of the overall incentive system impacting climate change issues, either by recognizing the development of new products/systems or new and improved processes.

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

Savings were generated over the life cycle of applications that are manufactured with the product volumes sold by Evonik in the specified year. In large part the reductions are caused by the five products "green tire" technology, amino acids in animal feed, foam stabilizers for insulation materials, special oxides in compact fluorescent lamps and additives in hydraulic oil. However, the percentage-based contribution of single products to the total savings in the supply chain is usually difficult to quantify and may therefore be based on assumptions. All calculation has been conducted in accordance with the recently published guideline "World Business Council for Sustainable Development: Addressing the Avoided Emissions Challenge: Guidelines from the chemical industry for

accounting for and reporting greenhouse gas (GHG) emissions avoided along the value chain based on comparative studies, 2013". The emission savings are also reviewed externally.

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

Low-carbon product and avoided emissions

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

Addressing the Avoided Emissions Challenge- Chemicals sector

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

50

Comment

Evonik products offer customers resource-saving and energyefficient solutions for a wide range of applications. Examples are amino acids for animal nutrition, silica-silane technology for "green tires", additives for hydraulic fluids, products for the construction of modern wind turbines, additives for environment-friendly water-based coatings, functional silanes to protect building facades, catalysts for the production of biodiesel, and ingredients based on renewable raw materials for the cosmetics industry. This covers energy savings and the reduction in greenhouse gas emissions, water consumption and the use of raw materials. The results show that around 50 percent of the sales generated by our chemical segments already come from products that make a measurable contribution to improving the resource efficiency of their applications. Besides the detailed information on various products and solutions enabling the reduction of GHG emissions in applications Evonik has a portfolio of low-carbon products. We have a set of biorenewable feedstock to produce the amino acids for animal nutrition like lysine (Biolys®), threonine and tryptophane (ThreAMINO®, TrypAMINO®). •In addition Bio-MTBE (methyl-tertiarybutylether) is a fuel additive. The raw material is bio-methanol made from bio-glycerin. It has been produced in relative small volume besides MTBE made from fossil methanol. •VESTAMID TERRA is a group of polyamides based on castor oil. A new polyamide 12 is currently in development where butadiene as raw material will be replaced by palm kernel oil. •We also proactive explore further replacement options of raw materials of fossil origin by fermentation of biomass derived sugars. •In addition various and project ideas e.g. acetone by ABE fermentation of sugars from empty fruit bunches of palm oil production.

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, 2012

Base year end

December 31, 2012

Base year emissions (metric tons CO₂e)

5,964,000

Comment

Scope 2 (location-based)

Base year start

January 1, 2012

Base year end

December 31, 2012

Base year emissions (metric tons CO₂e)

973,000

Comment

Scope 2 (market-based)

Base year start

January 1, 2012

Base year end

December 31, 2012

Base year emissions (metric tons CO₂e)

1,025,000

Comment

C5.2

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

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

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)

5,689,409

Start date

January 1, 2018

End date

December 31, 2018

Comment

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

We calculated our market-based scope 2-emissions in 2015 for the first time based on information of our suppliers. The supplier based information covers 94 % of our electricity related scope 2-emissions and about 80 % of our steam demand. All emission conversion factors have been implemented to our updated internal reporting system "SuRe2.0 System" since mid of 2016.

C6.3

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

Reporting year

Scope 2, location-based

2,956,111

Scope 2, market-based (if applicable)

3,853,462

Start date

January 1, 2018

End date

December 31, 2018

Comment

C6.4

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

Yes

C6.4a

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

Source

Joint ventures

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

Scope 1+2 CO₂ emissions considered under 6.4.a are from associated companies, joint ventures and companies whose influence on the asset, financial and earnings situation individually and as a whole is of subordinate importance. 2018 their Scope 1 and Scope 2 emissions total about 70000 t CO₂equiv. representing less than 1% of Scopes 1+2 total gross emissions.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

11,500,000

Emissions calculation methodology

The emissions have been calculated according to the "Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (revised edition 2004)", "Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013)", "Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (2011)" and the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

Chemical Raw Materials

The calculation of the CO₂eq burden is based on a top 100 list of most frequently purchased raw materials by volume. thinkstep AG identified current emission factors from the GaBi 7 database (2017) or, in rare cases, estimated emission factors from similar products or average values. An extrapolation of GHG emissions was performed on the basis of total raw material volumes. Emissions from production of indirect purchased goods and packaging materials are reported, emissions from purchased services are not considered in this category yet.

Indirect purchased goods and packaging materials

The calculation of emissions is based on a classified list of purchasing volumes of indirect procurement. The list contains both, purchases from indirect goods and from capital goods. Indirect procurement allocated all purchasing classes to the corresponding reporting categories 1 (purchased goods) and 2 (capital goods). The top 100 categories by purchase value were analyzed and an extrapolation of GHG emissions was performed on the basis of total purchase values. The top 100 purchasing classes analyzed cover more than 80% of the total purchased volume and therefore fulfill the condition of at least 80 % coverage recommended by WBCSD Scope 3 Chemical Sector Guidance. The amounts of purchased indirect goods and packaging materials were calculated based on average prices of the corresponding materials. For those materials, emission factors were identified from the GaBi 7 database (2017). Emissions were calculated by multiplication of amounts of purchased indirect goods with the emissions factors.

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

0

Explanation

Based on the experience gained over the last years and increasing knowledge of our internal expert groups, Evonik decided to lower the threshold for the relevance of categories from 5% to 2% of total Scope 3 emissions. This will provide us a more holistic view on Evonik's total carbon footprint. However, we will continue to conduct calculations of the categories currently classified as "not relevant" annually.

An additional calculation performed in 2012 analyzed the 100 most cost-intensive raw materials in terms of their purchase price per metric ton. It was based on the assumption that a high source material price may reflect relevant greenhouse gas emissions in the prior supply chain, for example because of high energy use. However, results documented that the 100 most costly raw material categories are not relevant for the determination of greenhouse gas emissions of Evonik because of their small quantities, although some had high emission factors.

Applying the emissions calculation methodology Evonik is quite confident about the accuracy of the figures mentioned above.

However with the new environmental targets in place starting 2019 Evonik will approach a selection of suppliers asking to provide more detailed Information about purchased raw materials.

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

600,000

Emissions calculation methodology

The emissions have been calculated according to the "Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (revised edition 2004)", "Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013)", "Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (2011)" and the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

The calculation of emissions from capital goods is based on the list of indirect procurement as well. All purchasing classes have been separated into capital goods (reported in category 2, capital goods) and other indirect goods (reported in category 1, purchased goods and services). Again, the top 100 categories by purchase value were analyzed and an extrapolation of GHG emissions was performed on the basis of total purchase values. The top 100 purchasing classes analyzed cover than 80% of the total purchased volume and therefore fulfill the condition of at least 80 % coverage recommended by WBCSD Scope 3 Chemical Sector Guidance. For each purchasing class a specific share of different materials (steel, concrete and others) was assumed as

recommended by WBCSD Scope 3 Chemical Sector Guidance. The amounts of materials for the construction and maintenance of capital goods were calculated based on average prices of the corresponding materials. For those materials, emission factors were identified from the GaBi 7 database (2017). Emissions were calculated by multiplication of amounts of materials with the emissions factors.

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

0

Explanation

Based on the experience gained over the last years and increasing knowledge of our internal expert groups, Evonik decided to lower the threshold for the relevance of categories from 5% to 2% of total Scope 3 emissions. This will provide us a more holistic view on Evonik's total carbon footprint. However, we will continue to conduct calculations of the categories currently classified as "not relevant" annually.

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

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

700,000

Emissions calculation methodology

The emissions have been calculated according to the "Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (revised edition 2004)", "Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013)", "Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (2011)" and the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

The emissions from production of solid, liquid and gaseous fuels (not reported in Scope 1 & 2) for power plants operated by Evonik have been calculated in this category. The produced energy amount provided by the Evonik Sustainability Reporting system is the basis for the calculation. Emission factors for the energy carriers have been taken from the GaBi 7 database (thinkstep AG) as of 2017.

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

0

Explanation

Based on the experience gained over the last years and increasing knowledge of our internal expert groups, Evonik decided to lower the threshold for the relevance of categories from 5% to 2% of total Scope 3 emissions. This will provide us a more

holistic view on Evonik's total carbon footprint. However, we will continue to conduct calculations of the categories currently classified as "not relevant" annually.

Upstream transportation and distribution

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

400,000

Emissions calculation methodology

The emissions have been calculated according to the "Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (revised edition 2004)", "Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013)", "Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (2011)" and the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

Transport distances and transport devices for inbound raw material transports are not known totally by Evonik, whereas distances and devices are well known for outbound transportation. Based on the outbound transports Evonik has calculated an average emission factor per metric tonne of product transported. This emission factor has been applied for the inbound transport calculation. The transport emission factors per transport device were taken from the European Chemical Industry Council (CEFIC). Since these emission factors do not include the CO₂eq burden for fuel, an additional share was included. Transport emissions have been calculated for the extrapolated raw material volumes.

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

0

Explanation

Based on the experience gained over the last years and increasing knowledge of our internal expert groups, Evonik decided to lower the threshold for the relevance of categories from 5% to 2% of total Scope 3 emissions. This will provide us a more holistic view on Evonik's total carbon footprint. However, we will continue to conduct calculations of the categories currently classified as "not relevant" annually.

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

600,000

Emissions calculation methodology

The emissions have been calculated according to the "Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (revised edition 2004)", "Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013)", "Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (2011)" and the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

Emissions from waste generated in operations were calculated based on the waste volumes per disposal route from the Evonik Sustainability Reporting system and evaluated with the same emission factors as in category "end-of-life treatment of sold products". According to the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)" energy recovery from internal waste incineration should be reported in scope 1. Due to missing data separation of Evonik internally and externally recovered waste, all emissions from waste incineration are reported not only in scope 1, but also double-counted in the category "Waste generated in operations" to the disadvantage of Evonik.

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

0

Explanation

Based on the experience gained over the last years and increasing knowledge of our internal expert groups, Evonik decided to lower the threshold for the relevance of categories from 5% to 2% of total Scope 3 emissions. This will provide us a more holistic view on Evonik's total carbon footprint. However, we will continue to conduct calculations of the categories currently classified as "not relevant" annually.

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

40,000

Emissions calculation methodology

The emissions have been calculated according to the "Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (revised edition 2004)", "Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013)", "Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (2011)" and the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

The CO₂eq emissions caused by business travel were calculated on the basis of data about travelling distances provided by Travel Management, using the corresponding emission factors from BEIS (Department for Business, Energy & Industrial Strategy) for all means of transport. The calculation of greenhouse gas emissions was performed for German employees and was extrapolated based on the global number of employees.

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

0

Explanation

Based on the experience gained over the last years and increasing knowledge of our internal expert groups, Evonik decided to lower the threshold for the relevance of categories from 5% to 2% of total Scope 3 emissions. This will provide us a more holistic view on Evonik's total carbon footprint. However, we will continue to conduct calculations of the categories currently classified as "not relevant" annually.

Employee commuting

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

90,000

Emissions calculation methodology

The emissions have been calculated according to the "Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (revised edition 2004)", "Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013)", "Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (2011)" and the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

The emissions caused by commuting to and from work were calculated on the basis of the assumptions given in the WBCSD Scope 3 Chemical Sector Guidance document: all Evonik employees individually commuting by car, daily traveling distance of 60 kilometers, 220 working days, and a high emission factor per driven kilometer from the UK Department for Business, Energy & Industrial Strategy (BEIS).

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

0

Explanation

Based on the experience gained over the last years and increasing knowledge of our internal expert groups, Evonik decided to lower the threshold for the relevance of categories from 5% to 2% of total Scope 3 emissions. This will provide us a more

holistic view on Evonik's total carbon footprint. However, we will continue to conduct calculations of the categories currently classified as "not relevant" annually.

Upstream leased assets

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

30,000

Emissions calculation methodology

The emissions have been calculated according to the "Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (revised edition 2004)", "Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013)", "Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (2011)" and the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

The emissions in this category contain emissions from leased company cars (w/o utility vehicles) and from electricity and heating of administrative sites. The CO₂eq emissions of Evonik company cars were calculated using data about the average distance travelled, the total number of company cars, manufacturer data on CO₂eq emissions (with 25% added) and additional allowances for car manufacturing and the provision of fuel. This calculation was performed for Germany and was extrapolated based on the global number of employees. CO₂eq emissions from heating, ventilation, and air-conditioning of administrative buildings are already included in the Sustainability Reporting system and accordingly, in Scope 1 and Scope 2 emissions for production facilities that are subject to regulatory CO₂eq reporting requirements. At purely administrative sites, greenhouse gas emissions were determined based on the extrapolation of data collected at several relevant sites.

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

0

Explanation

Based on the experience gained over the last years and increasing knowledge of our internal expert groups, Evonik decided to lower the threshold for the relevance of categories from 5% to 2% of total Scope 3 emissions. This will provide us a more holistic view on Evonik's total carbon footprint. However, we will continue to conduct calculations of the categories currently classified as "not relevant" annually.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

500,000

Emissions calculation methodology

The emissions have been calculated according to the "Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (revised edition 2004)", "Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013)", "Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (2011)" and the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

The CO₂eq emissions of outbound chemical product transports were calculated with CEFIC (European Chemical Industry Council) emission factors for transport devices.

The calculations were based on total outbound volumes, average transport distances, and the selected means of transport.

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

0

Explanation

Based on the experience gained over the last years and increasing knowledge of our internal expert groups, Evonik decided to lower the threshold for the relevance of categories from 5% to 2% of total Scope 3 emissions. This will provide us a more holistic view on Evonik's total carbon footprint. However, we will continue to conduct calculations of the categories currently classified as "not relevant" annually.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Explanation

Evonik sells several thousands of products which are used in countless (and partly unknown) applications. The processing of sold products can therefore not be assessed with a reasonable expenditure. This approach is aligned with the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)", which states that "Chemical companies are not required to report Scope 3, category 10 emissions, since reliable figures are difficult to obtain, due to the diverse application and customer structure".

However, we do conduct calculations of avoided emissions for selected lighthouse products based on "World Business Council for Sustainable Development, Avoiding Greenhouse Gas Emissions: Accounting for and Reporting Greenhouse Gas (GHG) Emissions Avoided along the Value Chain based on Comparative Studies, 2017". In these calculations, we compare the whole life cycle, including use-phase, of our

products with a valid benchmark (often represented by the mainstream technology or technology mix).

Use of sold products

Evaluation status

Not relevant, explanation provided

Explanation

Evonik sells several thousands of products which are used in countless (and partly unknown) applications. The use of sold products can therefore not be assessed with a reasonable expenditure. This approach is aligned with the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

However, we do conduct calculations of avoided emissions for selected lighthouse products based on "World Business Council for Sustainable Development, Avoiding Greenhouse Gas Emissions: Accounting for and Reporting Greenhouse Gas (GHG) Emissions Avoided along the Value Chain based on Comparative Studies, 2017". In these calculations, we compare the whole life cycle, including use-phase, of our products with a valid benchmark (often represented by the mainstream technology or technology mix).

End of life treatment of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

6,600,000

Emissions calculation methodology

The emissions have been calculated according to the "Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard (revised edition 2004)", "Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013)", "Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (2011)" and the "World Business Council for Sustainable Development: Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (2013)".

The emissions caused by the disposal of products by Evonik were calculated with the steps outlined below. Since Evonik does not always know the final application of its products, end-of-life emissions were not calculated for the applications per se, but only for their share of products by Evonik. That means disposal emissions were calculated exclusively for product volumes sold by Evonik, not for the applications produced from them with the help of third-party raw materials. CO₂eq emissions were calculated based on emission factors for the following disposal methods:

Recycling, Sanitary and open landfills, Incineration with and without energy recovery

Continent-specific percentage averages were calculated for every disposal method, which were then applied to the relative shares of all products sold by Evonik in 2017 on each continent. CO₂eq emissions for disposal were calculated on the basis of the amounts of sold products for each product line and the corresponding emission factors. Additionally, specific calculations were performed for certain product lines, in which products are clearly not disposed in conventional ways (e.g. using stoichiometric calculations).

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

0

Explanation

Based on the experience gained over the last years and increasing knowledge of our internal expert groups, Evonik decided to lower the threshold for the relevance of categories from 5% to 2% of total Scope 3 emissions. This will provide us a more holistic view on Evonik's total carbon footprint. However, we will continue to conduct calculations of the categories currently classified as "not relevant" annually.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Explanation

Scope 3 emissions resulting from downstream leased assets are not reported because this category is not applicable to Evonik Industries.

Franchises

Evaluation status

Not relevant, explanation provided

Explanation

Scope 3 emissions resulting from franchises are not reported because this category is not applicable to Evonik Industries. Franchises do not exist in Evonik's businesses.

Investments

Evaluation status

Relevant, not yet calculated

Explanation

Emissions from investments are not calculated in detail for Evonik as a suitable data basis for the calculation is not available at the moment.

Other (upstream)

Evaluation status

Explanation

Other (downstream)

Evaluation status

Explanation

C6.7

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

No

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

0.000635175

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

9,542,871

Metric denominator

unit total revenue

Metric denominator: Unit total

15,024,000,000

Scope 2 figure used

Market-based

% change from previous year

7.62

Direction of change

Decreased

Reason for change

In 2018 Evonik's specific emissions expressed in revenue decreased by about 7.62%. In the same period revenue increased by about 5% whereas Scope 2 emissions (gross) decreased by about 8% due to lower electricity and heat sales to third parties at Evonik

sites. Scope 1 and Scope 2 emissions (net) remained on the same Level as 2017 even though newly acquired Business of J.M.Huber was integrated into Evonik's carbon balance sheet effective 2018. Positive impact of ongoing emission reduction activities at Evonik sites is reflected in the emissions Performance e.g. process emissions reductions and energy efficiency activities

Intensity figure

0.865174

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

9,542,871

Metric denominator

metric ton of product

Metric denominator: Unit total

11,030,000

Scope 2 figure used

Market-based

% change from previous year

4.18

Direction of change

Decreased

Reason for change

In 2018 Evonik's specific emissions expressed in metric tons decreased by about 4.18%. In the same period production increased by about 0.5% whereas Scope 2 emissions (gross) decreased by about 8% due to lower electricity and heat sales to third parties at Evonik sites. Scope 1 and Scope 2 emissions (net) remained on the same Level as 2017 even though newly acquired Business of J.M.Huber was integrated into Evonik's carbon balance sheet effective 2018. Positive impact of ongoing emission reduction activities at Evonik sites is reflected in the emissions Performance e.g. process emissions reductions and energy efficiency activities

Intensity figure

265

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

9,542,871

Metric denominator

Other, please specify

No. of employees as of December 31

Metric denominator: Unit total

36,043

Scope 2 figure used

Market-based

% change from previous year

2.46

Direction of change

Decreased

Reason for change

In 2018 Evonik's specific emissions expressed in No. of employees decreased by about 2.46%. In the same period No. of employees decreased by about 1.5% whereas Scope 2 emissions (gross) decreased by about 8% due to lower electricity and heat sales to third parties at Evonik sites. Scope 1 and Scope 2 emissions (net) remained on the same Level as 2017 even though newly acquired Business of J.M.Huber was integrated into Evonik's carbon balance sheet effective 2018. Positive impact of ongoing emission reduction activities at Evonik sites is reflected in the emissions Performance e.g. process emissions reductions and energy efficiency activities

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO ₂ e)	GWP Reference
CO ₂	5,637,071	IPCC Fourth Assessment Report (AR4 - 100 year)
N ₂ O	33,873	IPCC Fourth Assessment Report (AR4 - 100 year)
CH ₄	17,352	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	1,112	IPCC Fourth Assessment Report (AR4 - 100 year)

PFCs	0	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	0	IPCC Fourth Assessment Report (AR4 - 100 year)
NF3	0	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO ₂ e)
Austria	53,679
Belgium	595,869
Brazil	89,667
Canada	4,153
China	346,084
France	10,511
Germany	3,392,087
Hungary	18,017
India	29,850
Indonesia	18,456
Italy	1,080
Japan	9,943
Netherlands	33,202
New Zealand	13,661
Singapore	41,534
Slovakia	34,385
South Africa	9,586
Republic of Korea	186
Spain	10,270
Taiwan, Greater China	24,737
Thailand	23,816
Turkey	21,277
United Kingdom of Great Britain and Northern Ireland	2,481
United States of America	884,108
Finland	20,772

C7.3

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

By business division

C7.3a

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

Business division	Scope 1 emissions (metric ton CO ₂ e)
Technology and Infrastructure	2,681,283
Nutrition & Care	1,127,581
Resource Efficiency	976,423
Performance Materials	904,122

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

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

	Gross Scope 1 emissions, metric tons CO ₂ e	Comment
Chemicals production activities	5,689,409	Evonik's Scope 1 emissions do reflect emissions from combustion processes that were carried out to generate steam and electricity for third parties that do not belong to the Group as well as emissions from chemical processes.

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Argentina	30,527	28,283	125,684	0
Austria	4,651	1,923	30,169	12,398
Brazil	27,114	39,683	198,302	0

Canada	19,325	21,144	112,881	0
China	220,961	273,878	516,114	0
France	10,952	10,932	64,761	0
Germany	1,630,844	2,192,827	3,281,705	237,593
Hungary	5,446	7,452	19,905	0
India	15,013	14,675	20,645	0
Indonesia	16,716	17,221	29,647	0
Italy	726	489	2,193	0
Japan	30,811	29,585	94,106	0
Netherlands	24,785	24,459	77,600	0
New Zealand	1,305	1,800	12,497	0
Singapore	64,938	81,647	173,356	0
Slovakia	4,165	9,277	26,295	0
South Africa	14,151	13,158	25,258	0
Republic of Korea	66,926	61,988	205,817	0
Spain	16,637	17,273	79,954	0
Taiwan, Greater China	22,831	24,845	57,575	0
Thailand	6,912	6,453	15,319	0
Turkey	26,237	24,735	101,009	0
United Kingdom of Great Britain and Northern Ireland	952	1,731	3,434	0
United States of America	687,804	935,744	1,652,298	0
Finland	1,280	5,430	10,773	0
Belgium	4,097	6,511	19,799	
Norway	5	320	636	

C7.6

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

By business division

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO ₂ e)	Scope 2, market-based emissions (metric tons CO ₂ e)
Technology and Infrastructure	1,685,995	2,346,359
Performance Materials	497,046	501,063
Nutrition & Care	484,825	682,377
Resource Efficiency	288,246	323,663

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

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

	Scope 2, location-based, metric tons CO ₂ e	Scope 2, market-based (if applicable), metric tons CO ₂ e	Comment
Chemicals production activities	2,956,111	3,853,462	Evonik is a Company focussed on specialty chemicals

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
Other (please specify) Base Chemicals	53	Details about the calculation of emissions are explained in CDP question C6.5. Following the calculation, the top 100 raw materials were categorized into three groups: "Base Chemicals", "Specialty Chemicals", and "Inorganics".
Other (please specify) Inorganics	26	Details about the calculation of emissions are explained in CDP question C6.5. Following the calculation, the top 100 raw materials were categorized into three groups: "Base Chemicals", "Specialty Chemicals", and "Inorganics".
Other (please specify) Specialty chemicals	21	Details about the calculation of emissions are explained in CDP question C6.5. Following the calculation, the top 100 raw materials were categorized into three groups: "Base Chemicals", "Specialty Chemicals", and "Inorganics".

C-CH7.8a

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

	Sales, metric tons	Comment
Carbon dioxide (CO ₂)	0	Evonik does not sell Carbon dioxide
Methane (CH ₄)	0	Evonik does not sell Methane
Nitrous oxide (N ₂ O)	0	Evonik does not sell Nitrous oxide
Hydrofluorocarbons (HFC)	0	Evonik does not sell HFC
Perfluorocarbons (PFC)	0	Evonik does not sell PFC
Sulphur hexafluoride (SF ₆)	0	Evonik does not sell SF ₆
Nitrogen trifluoride (NF ₃)	0	Evonik does not sell 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	124,800	Decreased	1.3	<p>Based on internal corporate driven discussion 832TJ electricity purchased in 2017 with a market-based emission factor of 218tCO₂/TJ (181376 tCO₂) was substituted in 2018 by purchased electricity with a market-based emission factor of 68tCO₂/TJ resulting in 56576 tCO₂.</p> <p>181376 tCO₂ - 56576 tCO₂ = 124800 t CO₂ reduction</p> <p>Out total Scope 1 and Scope 2 emissions in the previous year were 9.9 Million t CO₂, therefore we calculate our reduction of 1.3% $(-0.1248/9.9 \times 100\% = -1.3\%)$</p>

				Explanation: The reduction could be achieved by displacing high-carbon electricity by low-carbon electricity at a site with high electricity intensity.
Other emissions reduction activities	13,732	Decreased	0.14	<p>Out total Scope 1 and Scope 2 emissions in the previous year were 9.9 Million t CO₂, therefore we calculate our reduction of 0.14% ($-0.0137/9.9 \times 100\% = -0.14\%$)</p> <p>Explanation: In 2018 13732 t CO₂ were reduced by a basket consisting of different energy efficiency measures. e.g. a) natural gas minimum flow reduction by optimization process technology b) conversion to LED instead of lightbulbs c) replacement of heat exchanger by more efficient ones</p>
Divestment	0		0	no divestments took place in 2018
Acquisitions	194,262	Increased	2	<p>Out total Scope 1 and Scope 2 emissions in the previous year were 9.9 Million t CO₂, therefore we calculate our additional CO₂-emissions of 2.0% ($0.194262/9.9 \times 100\% = 2.0\%$)</p> <p>Explanation: acquisition of the silica business of J.T. Huber with 7 production sites</p>
Mergers				
Change in output	188,368	Decreased	1.9	<p>Out total Scope 1 and Scope 2 emissions in the previous year were 9.9 Million t CO₂, therefore we calculate our reduction of CO₂-emissions of 1.9% ($-0.188368/9.9 \times 100\% = -1.9\%$)</p> <p>Explanation: Evonik operates production facilities at more than 100 sites globally. Depending on demand and strategic planning, on the one hand and significant variation of CO₂-intensity of different businesses on the other hand the production portfolio and volumes at these sites vary from year to year, which has an influence on total emissions. Due</p>

				to mi nor changes at a large number of sites, total emissions decreased in 2018 compared to 2017.
Change in methodology	0		0	no Change in methodology
Change in boundary	0		0	no Change in boundary
Change in physical operating conditions	0		0	no change
Unidentified				
Other				

C7.9b

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

Market-based

C8. Energy

C8.1

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

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

C8.2

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

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes

Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
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 MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	18,559,442	18,559,442
Consumption of purchased or acquired electricity		0	1,920,937	1,920,937
Consumption of purchased or acquired heat		0	0	0
Consumption of purchased or acquired steam		0	2,051,864	2,051,864
Consumption of purchased or acquired cooling		0	0	0
Consumption of self-generated non-fuel renewable energy		89,991		89,991
Total energy consumption		89,991	22,532,244	22,622,235

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)	LHV (lower heating value)	18,559,442
Consumption of purchased or acquired electricity		1,920,937
Consumption of purchased or acquired heat		0
Consumption of purchased or acquired steam		2,051,864
Consumption of purchased or acquired cooling		0
Consumption of self-generated non-fuel renewable energy		89,991

Total energy consumption	22,622,235
--------------------------	------------

C8.2b

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

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	Yes
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Fuels (excluding feedstocks)

Coal

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

4,819,794

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

482,132

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

4,337,662

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

11,324,060

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

6,548,447

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

4,775,613

Comment

Fuels (excluding feedstocks)

Crude Oil

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

103,328

MWh fuel consumed for self-generation of electricity

43,969

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

59,358

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Comment

Fuels (excluding feedstocks)

Other, please specify

Residual fuels

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

2,312,261

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

1,276,200

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self-cogeneration or self-trigeneration

1,036,061

Comment

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Coal

Emission factor

0.336

Unit

metric tons CO₂e per MWh

Emission factor source

Our sites use individual emission factors to calculate the emissions released through the burning of fuels. If specific emissions factors are not available, sites use the standard emission factor reported here. All emission factors applied in Europe are verified externally according to EU-ETS (European Union-Emissions Trading Scheme)

Comment

Crude Oil

Emission factor

0.24

Unit

metric tons CO₂e per MWh

Emission factor source

Our sites use individual emission factors to calculate the emissions released through the burning of fuels. If specific emissions factors are not available, sites use the standard emission factor reported here. All emission factors applied in Europe are verified externally according to EU-ETS (European Union-Emissions Trading Scheme)

Comment

Natural Gas

Emission factor

0.223

Unit

metric tons CO₂e per MWh

Emission factor source

Our sites use individual emission factors to calculate the emissions released through the burning of fuels. If specific emissions factors are not available, sites use the standard emission factor reported here. All emission factors applied in Europe are verified externally according to EU-ETS (European Union-Emissions Trading Scheme)

Comment

Other

Emission factor

0.386

Unit

metric tons CO₂e per MWh

Emission factor source

Fuel type: residual fuel

Our sites use individual emission factors to calculate the emissions released through the burning of fuels. If specific emissions factors are not available, sites use the standard emission factor reported here. All emission factors applied in Europe are verified externally according to EU-ETS (European Union-Emissions Trading Scheme)

Comment

C8.2e

(C8.2e) 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	2,542,293	2,542,293	89,991	89,991
Heat	0	0	0	0
Steam	12,272,356	9,983,007	0	0
Cooling	804,727	649,367	0	0

C-CH8.2e

(C-CH8.2e) 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	2,542,293	2,542,293
Heat	0	0
Steam	9,983,007	9,983,007
Cooling	649,367	649,367

C8.2f

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

Basis for applying a low-carbon emission factor

Energy attribute certificates, Guarantees of Origin

Low-carbon technology type

Hydropower

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

Europe

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

160,000

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

0

Comment

C-CH8.3

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

Feedstocks

Other, please specify

Sugar

Total consumption

526,274

Total consumption unit

metric tons

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

0.41

Heating value of feedstock, MWh per consumption unit

0

Heating value

Unable to confirm heating value

Comment

Use: Production of aminoacids

Feedstocks

Natural gas

Total consumption

87,736

Total consumption unit

metric tons

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

2.58

Heating value of feedstock, MWh per consumption unit

12.7

Heating value

LHV

Comment

Mainly for H2O2-production

C-CH8.3a

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

	Percentage of total chemical feedstock (%)
Oil	
Natural Gas	0.89
Coal	0
Biomass	5.34
Waste	0
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.

Description

Waste

Metric value

240,000

Metric numerator

tons

Metric denominator (intensity metric only)

% change from previous year

1.5

Direction of change

Decreased

Please explain

Hazardous production waste declined by 4,000 metric tons, principally because availability of the sulfuric acid cracking plant in Marl (Germany) was higher in 2018 compared to 2017.

C-CH9.3a

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

C-CH9.6

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

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 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

Verification or assurance cycle in place

Annual process


Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 Evonik_Sustainability_Report_2018.pdf

Page/ section reference

Independent Auditor's Report on a Limited Assurance Engagement on Greenhouse Gas Emission Data on pages 109-110

Total Scope 1 figure on page 68; Table 19


Assurance reference for the chapter "Environment" on page 64

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

 Evonik_Sustainability_Report_2018.pdf

Scope

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 Evonik_Sustainability_Report_2018.pdf

Page/ section reference

Independent Auditor's Report on a Limited Assurance Engagement on Greenhouse Gas Emission Data on pages 109-110

Total Scope 2 location-based figure on page 68; Table 19

Assurance reference for the chapter "Environment" on page 64

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

 Evonik_Sustainability_Report_2018.pdf

Scope

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 Evonik_Sustainability_Report_2018.pdf

Page/ section reference

Independent Auditor's Report on a Limited Assurance Engagement on Greenhouse Gas Emission Data on pages 109-110

Total Scope 2 market-based figure on page 68; Table 19

Assurance reference for the chapter "Environment" on page 64

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

 Evonik_Sustainability_Report_2018.pdf

C10.1b

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

Scope

Scope 3- all relevant categories

Verification or assurance cycle in place


Annual process

Status in the current reporting year

Complete

Attach the statement

 CDP Verification Letter 20190725.pdf

 EvonikECF_2018_EN.pdf

Page/section reference

Independent Practitioner's Report on a Limited Assurance Engagement on Greenhouse Gas Emission Data on pages 46-47.

All relevant categories of scope 3 emissions on page 7; Table 2

Relevant standard

ISAE3000

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
C5. Emissions performance	Year on year change in emissions (Scope 1 and 2)	ISAE 3000	Year on year changes in Scope 1 and 2 emissions are described within Evonik's annual sustainability Report (P.68, T19), which is verified by PricewaterhouseCoopers

			GmbH. Thus they are included in the verification process  ¹
C4. Targets and performance	Year on year emissions intensity figure	ISAE 3000	Year on year emissions intensity figure are described within Evonik's annual sustainability Report (P.66; T16), which is verified by PricewaterhouseCoopers GmbH. Thus they are included in the verification process  ¹
C5. Emissions performance	Year on year change in emissions (Scope 3)	ISAE 3000	Year on year changes in Scope 3 emissions are described within Evonik's annual Evonik Carbon Footprint Report (P. 21; T4), which is verified by PricewaterhouseCoopers GmbH. Thus they are included in the verification process  ²
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ISAE 3000	Year on year changes in Scope 1 and 2 emissions are described within Evonik's annual sustainability Report (P.68, T19), which is verified by PricewaterhouseCoopers GmbH. Thus they are included in the verification process  ¹
C9. Additional metrics	Other, please specify Hazardous waste from production	ISAE 3000	Year on year changes in hazardous waste from production are described within Evonik's annual sustainability Report (P.73, T27), which is verified by PricewaterhouseCoopers GmbH. Thus they are included in the verification process  ¹
C1. Governance	Other, please specify climate related organizational structure and responsibilities	ISAE 3000	Climate related organizational structure and responsibilities are described within Evonik's annual sustainability report (Ps. 65-66; C30), which is verified by PricewaterhouseCoopers GmbH. Thus they are included in the verification process  ¹

 ¹Evonik_Sustainability_Report_2018.pdf

 ²EvonikECF_2018_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.

Alberta carbon tax

EU ETS

Korea ETS

Shanghai pilot ETS

C11.1b

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

EU ETS

% of Scope 1 emissions covered by the ETS

67

Period start date

January 1, 2018

Period end date

December 31, 2018

Allowances allocated

2,303,055

Allowances purchased

2,164,000

Verified emissions in metric tons CO₂e

3,819,089

Details of ownership

Facilities we own and operate

Comment

a) Difference between allowances allocated/purchased and verified emissions are subject to allowances portfolio management activities

b) In 2018 the free allocation of allowances undercut the real emissions of all EU ETS

facilities in total. The main reason for this situation is that there has not been a free allocation of allowances for the power generation since the beginning of the third trading period. This shortfall is going to continue within the whole third trading period (2013 – 2020) and will intensify in the fourth trading period (2021 – 2030).

Korea ETS

% of Scope 1 emissions covered by the ETS

0

Period start date

January 1, 2018

Period end date

December 31, 2018

Allowances allocated

56,697

Allowances purchased

0

Verified emissions in metric tons CO₂e

58,372

Details of ownership

Facilities we own and operate

Comment

- a) Difference between allowances allocated/purchased and verified emissions are subject to allowances portfolio management activities
- b) In South Korea, Evonik participates only with one site (Ulsan) in the Korea ETS. So far, there were only minor additional purchase volumes necessary to cover the real emissions. It stays the same in the near future.

Shanghai pilot ETS

% of Scope 1 emissions covered by the ETS

5

Period start date

January 1, 2018

Period end date

December 31, 2018

Allowances allocated

363,897

Allowances purchased

0

Verified emissions in metric tons CO₂e

335,082

Details of ownership

Facilities we own and operate

Comment

- a) Difference between allowances allocated/purchased and verified emissions are subject to allowances portfolio management activities
- b) In China, Evonik participates only with one site (MUSC) in Shanghai's pilot ETS. So far, the allocations were sufficient to cover the real emissions. The emissions for 2018 have not been verified yet, since the verification report is not due until June 30th, 2019. So far, no purchases were necessary and will not be in the near future.

C11.1c

(C11.1c) Complete the following table for each of the tax systems in which you participate.

Alberta carbon tax

Period start date

January 1, 2018

Period end date

December 31, 2018

% of emissions covered by tax

100

Total cost of tax paid

147,429

Comment

C11.1d

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

The Energy Management department (Evonik centre of competence for all relevant topics about energy economy) serves as central interface not only for the purchase of allowances and supporting the operational units when designing a purchasing strategy but also for monitoring the real emissions and the available allowances. Energy Management also supports the operational units in complying with the regulations. Among others, Energy Management is the central information hub within Evonik for emissions trading and taxation systems. The strategy of Evonik around the world includes the consultation of the operational units and monitoring the regulatory developments. In consultation with the operational units and under

consideration of the available certificates and the planned emissions, the needed allowances for the compliance will be purchased successively within the third and fourth trading period of the EU ETS.

For the Chinese ETS, Evonik owns also a specialized department for supporting the operational units in this matter. An exchange between the EU and the Chinese department takes place, since both departments are being functionally steered by the same management. Same applies for the Korea ETS.

Besides complying with the Chinese, EU and Korea ETS by purchasing certificates as well as the carbon taxation in Alberta and Singapore (has started in 2019), Evonik is promoting internal energy efficiency measures by the in 2015 implemented ISO 50001 (energy management system including energy policy, energy targets, energy performance indicators etc.), an internal service department improving the value chain globally (SEEC) and site-driven activities to reduce the need for certificates.

Further more Evonik developed a new ambitious GHG emission reduction strategy based on absolute reduction targets effective 2019. This will help us to comply with the EU-ETS and to manage risks arising from this scheme and potential future emission cap-and-trade systems globally.

Setting GHG emission reduction targets and setting-up initiatives to reducing GHG emissions has become an integral part of Evonik's climate strategy. E.g. we decided to improve our Scope 3 emissions resulting from raw materials and set more ambitious Scope 1 and 2 targets following the Paris Agreement. Details will be disclosed within next years CDP participation.

These adjusted Scope 1, 2 and 3 targets will increase Evonik's contribution to climate protection significantly and support our strategic approach to complying with the EU ETS.

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

C12.1a

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

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

70

% total procurement spend (direct and indirect)

80

% Scope 3 emissions as reported in C6.5

0

Rationale for the coverage of your engagement

Evonik cannot evaluate all suppliers, thus a selection based on a combination of country, raw material supplied to Evonik and procurement spent to individual suppliers is made. The online assessments are carried out on Evonik's behalf by the service provider EcoVadis. More than 500 suppliers have been evaluated in 2018. The audit criteria include both the specifications of our code of conduct and industry-specific requirements that we have jointly laid out in the industry initiative Together for Sustainability (TfS). The initiative is intended to help standardize the sustainability requirements of suppliers in the chemical industry. This will help us achieve our target effective 2019 to reduce our raw material backpack by 3% annually within the next years.

Impact of engagement, including measures of success

The online assessments are analyzed and documented in order to define specific improvement measures in case of unsatisfactory results. In case of critical results, Evonik requests the suppliers to rectify the identified weaknesses within an appropriate period of time based on specific action plans. By requesting carbon and climate change information from our suppliers, suppliers become more aware of sustainability topics.

Comment

Starting 2018 Evonik intensified collaboration with suppliers by defining top 30 raw materials based on purchase spent and carbon footprint of individual raw materials. Targeting at reducing raw material footprint thus Evonik Scope 3 emissions category 1 a detailed knowledge of suppliers raw material information is essential. Suppliers will be informed accordingly and being asked to provide relevant information by end of 2019.

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?

- Trade associations
- Funding research organizations
- Other

C12.3b

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

Yes

C12.3c

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

Trade association

VCI

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Raise awareness for the specific ways in which the chemical industry can support GHG emissions mitigation and adaptation to climate change and to advocate for realization of a business environment in which the chemical industry can realize this potential best. Furthermore, the VCI is committed to international standards for sustainability and works closely with global organizations for the promotion of sustainable development, climate mitigation and resource efficiency.

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

Evonik is involved with the VCI regarding important issues related to the German chemical industry, including climate change, and is influencing the association through active involvement in relevant committees and working groups.

Trade association

International Council of Chemical associations (ICCA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Raise awareness for the specific ways in which the chemical industry can support GHG emissions mitigation and adaptation to climate change and to advocate for realization of a business environment in which the chemical industry can realize this potential best. Furthermore, the ICCA is committed to international standards for sustainability and works closely with global organizations for the promotion of sustainable development, climate mitigation and resource efficiency.

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

Evonik is involved with the ICCA regarding important issues related to the Global chemical industry, including climate change, and is influencing the association through active involvement in relevant committees and working Groups, e.g. Energy and climate Change leadership group

C12.3d

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

No

C12.3e

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

econsense - a German business network founded on the initiative of the Federation of German Industries with the goal to provide a dialogue platform and think tank to advance sustainable development in business. Among other econsense has been in discourse with policymakers regarding the implementation of the EU Directive on disclosure of non-financial information, the recommendations of the TCFD and the Circular Economy legislation e.g., Ecodesign Directive of the European Commission. Furthermore, econsense contributed with side events to COP23 in Bonn. Evonik actively contributes to the work in several econsense groups e.g.

Environmental & Climate Issues, Reporting & Rating, SDGs & Digital Transformation and Sustainability in the Supply Chain.

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?

Evonik's organizational processes are designed to ensure a common approach for all direct and indirect engagement activities, consistent with our strategy on climate change - across divisions and geographies. Head of Corporate ESHQ, reports directly to the Chief Human Resource Officer of Evonik Industries. In addition both positions are members of the Corporate Responsibility Steering Committee and the Corporate ESHQ Steering Committee, both chaired by CHRO. Relevant topics in the field of sustainability, environment, safety, health and quality including the status and progress of various programs are discussed between CHRO, Head of Corporate ESHQ and the Heads of Evonik's segments on a quarterly basis. The involvement of these representatives in the Committee mentioned ensures the consideration of our overall climate change strategy in all political activities and the alignment of the activities with our strategy.

C12.4

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

Publication

In mainstream reports

Status

Complete

Attach the document

 Evonik_Financial_Report_2018.pdf

Page/Section reference

Page 11: As preconditions for Evonik's future viability, sustainable business activities and responsible conduct are cornerstones of Evonik's business model.

Content elements

Governance

Strategy

Comment

Publication

In mainstream reports

Status

Complete

Attach the document

 Evonik_Financial_Report_2018.pdf

Page/Section reference

Page 38: In chapter "R&D", Evonik's innovation growth fields are highlighted such as additive manufacturing or membranes which both help to mitigate the effects of climate change.

Content elements

Strategy

Risks & opportunities

Other, please specify

Innovation

Comment

Publication

In mainstream reports

Status

Complete

Attach the document

 Evonik_Financial_Report_2018.pdf

Page/Section reference

Page 40-41: The chapter "Sustainability" reports on Evonik's sustainability strategy and management as well as on the progress being made on the materiality analysis and sustainability analysis of Evonik's businesses as well as on their positive and negative eco-nomic, ecological and societal impacts.

Content elements

Strategy

Emission targets

Comment

Publication

In mainstream reports

Status

Complete

Attach the document

 Evonik_Financial_Report_2018.pdf

Page/Section reference

Page 44-46: The section "Safety and Environment" bundles facts and figures on climate-related activities of Evonik (new sustainability strategy, Corporate Carbon Footprint, amount of CO2 emissions, environmental protection measures etc.). Moreover, it reports on Evonik's new environmental targets (reduction of specific GHG emissions by 50% until 2025 (compared with the level in 2008) and the degree of attainment (page 46).

Content elements

Emissions figures

Emission targets

Other, please specify

new sustainability strategy, environmental protection measures

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Evonik_Sustainability_Report_2018.pdf

Page/Section reference

Page 13: Chapter "Strategy & Growth" describes the five pillars of Evonik's sustainability strategy: (1.) Sustainability is part of Evonik's market proposition; (2.) Evonik is committed to foresighted resource management; (3.) Evonik has defined growth engines with a clear focus on sustainability; (4.) Evonik integrates sustainability into its strategic management processes; (5.) Evonik sets high standards for continuous improvement of reporting.

Content elements

Strategy

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Evonik_Sustainability_Report_2018.pdf

Page/Section reference

Page 14: Evonik's sustainability management is described as well as the responsibility for climate-related activities in the Executive Board.

Content elements

Governance
Strategy

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Evonik_Sustainability_Report_2018.pdf

Page/Section reference

Page 18: In 2018, Evonik conducted a stakeholder conference on climate protection in Berlin with approx. 150 participants . Evonik plays an active part in many societal debates. [...] Our offices in Berlin and Brussels are important interfaces for dialogue between representatives of politics and public life. In 2018, they also took up issues in the areas of digitalization, energy and climate protection, sustainability and the environment, research and development, and agricultural policy.

Content elements

Other, please specify
Stakeholder Dialogue

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Evonik_Sustainability_Report_2018.pdf

Page/Section reference

Page 19: In 2018, we systematically examined the SDGs of relevance for Evonik. We have developed our own method to identify Evonik's influence, paying special attention to the sub-targets of the 17 SDGs. The evaluation resulted in the following ranking of the SDGs of relevance for Evonik: Responsible Consumption and Production (SDG 12); Climate Action (SDG 13); Good-health and Well-being (SDG 3); Clean Water and Sanitation (SDG 6).

Content elements

Strategy
Other, please specify
SDGs

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Evonik_Sustainability_Report_2018.pdf

Page/Section reference

Page 21 ff: 2018, we extensively validated Evonik's materiality analysis to make prioritization even more meaningful. The top 3 materiality topics are: (1.) More sustainable products/solutions for our customers; (2.) Climate change and emissions into the air; (3.) Efficient use of scarce resources/ circular economy.

Page 27: In 2018, Evonik participated in the Carbon Disclosure Project, scoring B.

Content elements

Other, please specify
Materiality analysis; CDP

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Evonik_Sustainability_Report_2018.pdf

Page/Section reference

Page 54-55: Sustainability is an important criterion in our innovation activities. We therefore work for and with our customers to find increasingly energy- and resource-

efficient solutions for a broad spectrum of applications.

Content elements

Other, please specify
Innovation; Value Chain

Comment


Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Evonik_Sustainability_Report_2018.pdf

Page/Section reference

Page 64 ff: Protecting our environment and the climate are major global challenges of our age. [...] Evonik's present environmental targets are for the period 2013-2020 and the target reduction in specific greenhouse gases will be achieved before 2020. Therefore, we defined new environmental targets in the reporting period: Absolute reduction in scope 1 and 2 emissions of 50 percent by 2025, compared with the level in 2008.

Page 77 ff: Section safety; environmental incidents

Content elements

Strategy
Emissions figures
Emission targets
Other, please specify
Safety

Comment





Publication

In voluntary communications

Status

Complete

Attach the document

-  2018-06-18_PressRelease_Sepuran.pdf
-  2019-02-27_PressRelease_ULTRASIL 9100 GR EN.pdf
-  2018-09-13_DJSI.pdf
-  2018-12-05_PressRelease_Reducing CO2 emissions in transport.pdf

Page/Section reference

Press Release: Evonik launches new membrane for efficient natural gas processing
Press Release: Evonik listed in the Dow Jones Sustainability Indices Europe and World for the third time in a row.
Press Release: Reducing CO2 emissions in transport.
Press Release: ULTRASIL® 9100 GR allows production of Green Tires for trucks and buses.

Content elements

Other, please specify
Innovation, natural gas grid, biofuel; Rating & Ranking, DJSI; Reducing CO2 emissions in transport; green tires

Comment



Publication

In other regulatory filings

Status

Complete

Attach the document

-  Umwelterklaerung-2018_Marl.pdf
-  aktuelle umwelterklärung herne 2018.pdf

Page/Section reference

Environmental declaration 2018
- for the Herne site (only available in German)
- for Marl Chemical Park (only available in German)

Content elements

Other, please specify
Environmental declarations

Comment

Publication

In other regulatory filings

Status

Complete

Attach the document

 ECF_2018_EN.pdf

Page/Section reference

Brochure: Evonik Carbon Footprint 2018

Content elements

Strategy
Emissions figures
Emission targets

Comment

C14. Signoff

C-FI

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

C14.1

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

	Job title	Corresponding job category
Row 1	Evonik Industries CHRO, Member of the Board responsible for Human Resources & Environment, Safety, Health and Quality & Sustainability	Director on board

SC. Supply chain module

SC0.0

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

SC0.1

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

	Annual Revenue
Row 1	15,024,000,000

SC0.2

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

Yes

SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	DE	000EVNK013

SC1.1

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

Requesting member

ARKEMA

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

29,760

Uncertainty ($\pm\%$)

1

Major sources of emissions

Energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

ARKEMA

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

4,610

Uncertainty ($\pm\%$)

1

Major sources of emissions

Purchased electricity and heat

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

ARKEMA

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

106,720

Uncertainty (±%)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Braskem S/A

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

1,610

Uncertainty (±%)

1

Major sources of emissions

energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Braskem S/A

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

250

Uncertainty (±%)

1

Major sources of emissions

electricity and heat purchased

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Braskem S/A

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

5,800

Uncertainty ($\pm\%$)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Bridgestone Corporation

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

30,970

Uncertainty ($\pm\%$)

1

Major sources of emissions

energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Bridgestone Corporation

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

4,800

Uncertainty (±%)

1

Major sources of emissions

purchased electricity and heat

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Bridgestone Corporation

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

111,100

Uncertainty (±%)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Colgate Palmolive Company

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

16,780

Uncertainty (±%)

1

Major sources of emissions

energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Colgate Palmolive Company

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

2,600

Uncertainty ($\pm\%$)

1

Major sources of emissions

purchased electricity and heat

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Colgate Palmolive Company

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

60,200

Uncertainty ($\pm\%$)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Johnson & Johnson

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

10,400

Uncertainty (±%)

1

Major sources of emissions

energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Johnson & Johnson

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

1,600

Uncertainty (±%)

1

Major sources of emissions

purchased electricity and heat

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Johnson & Johnson

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

37,500

Uncertainty (±%)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

L'Oréal

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

17,000

Uncertainty ($\pm\%$)

1

Major sources of emissions

energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

L'Oréal

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

2,600

Uncertainty ($\pm\%$)

1

Major sources of emissions

purchased electricity and heat

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

L'Oréal

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

60,800

Uncertainty (±%)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Pirelli

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

14,900

Uncertainty (±%)

1

Major sources of emissions

energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Pirelli

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

2,300

Uncertainty (±%)

1

Major sources of emissions

purchased electricity and heat

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Pirelli

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

53,500

Uncertainty ($\pm\%$)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

SABIC

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

9,100

Uncertainty ($\pm\%$)

1

Major sources of emissions

energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

SABIC

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

1,400

Uncertainty (±%)

1

Major sources of emissions

purchased electricity and heat

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

SABIC

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

32,600

Uncertainty (±%)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Symrise AG

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

3,000

Uncertainty (±%)

1

Major sources of emissions

energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Symrise AG

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

460

Uncertainty ($\pm\%$)

1

Major sources of emissions

purchased electricity and heat

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Symrise AG

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

10,700

Uncertainty ($\pm\%$)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Unilever plc

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

15,800

Uncertainty (±%)

1

Major sources of emissions

energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Unilever plc

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

2,400

Uncertainty (±%)

1

Major sources of emissions

purchased electricity and heat

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Unilever plc

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

56,700

Uncertainty (±%)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Volkswagen AG

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

380

Uncertainty ($\pm\%$)

1

Major sources of emissions

energy conversion and chemical processes

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Volkswagen AG

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

60

Uncertainty ($\pm\%$)

1

Major sources of emissions

purchased electricity and heat

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Requesting member

Volkswagen AG

Scope of emissions

Scope 3

Allocation level

Company wide

Emissions in metric tonnes of CO₂e

1,350

Uncertainty (±%)

1

Major sources of emissions

purchased raw materials and end-of-life treatment

Verified

Yes

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

SC1.2

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

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	focussing on main products of customers
Doing so would require we disclose business sensitive/proprietary information	individual working Groups on Business line level

SC1.4

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

Yes

SC1.4a

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

capabilities have already been developed and are available. More important will be the direct contact on expert level.

SC2.1

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

SC2.2

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

No

SC3.1

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

No

SC3.2

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

No

SC4.1

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

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms