Welcome to your CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

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

LANXESS is a leading specialty chemicals company with sales of EUR 7.6 billion in 2021. The company currently has about 14,900 employees in 33 countries. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics.

LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe), ISS (“prime” status), MSCI (AA rating), FTSE4Good, CDP Climate “A“ listed and signatory to the UN Global Compact ***

For LANXESS, acting sustainably means being ready for the future. So we are in a position to withstand uncertain times: We are stable, use resources sparingly, take social responsibility, and do business from a long-term perspective. With this entrepreneurial mindset, which is firmly rooted in our strategy, we take our global responsibility and make an important contribution to the future.

As a specialty chemicals enterprise operating worldwide, we believe that developing efficient technologies that protect the environment is a well-founded strategy for securing the long-term growth of our company. Every business decision at LANXESS takes into account the company’s responsibility for society, environment, climate, and business results. Regardless of where we do business, we are a leading provider of quality solutions. This means that we not only supply our clients with high-quality products, but also actively enable their own innovation and sustainable processes along their value chain. *** LANXESS is serious about climate protection - both in terms of its own carbon footprint and with regard to the benefits to society. “Climate Action and Energy Efficiency” is one of our five material sustainability topics and as such incorporated into all strategy processes and integral part of LANXESS Corporate Strategy, the group wide risk management system and the agenda of all relevant operational committees. The foundation of LANXESS’ climate strategy is still the objective to reduce our own impact and manage emissions from our processes, sourced energy and raw materials, to make LANXESS more resilient in the long-term perspective. To this end, LANXESS has declared to become climate neutral by 2040 for scope 1 and 2. This firm ambition is reflected in our concrete successive climate goals and the goal to further increase energy efficiency: • 60% reduction of CO2e emissions by 2025 (base year: 2004) • 75% reduction of CO2e emissions by 2030 (base year: 2004) • Climate neutral by 2040 •

Increase in energy efficiency of 40% to < 1.24 (MWh/t) by 2025 (base year: 2015) *** In addition, beyond our own production processes we are using our knowledge and experience to develop products and technologies which enable emissions savings. As an example, thanks to the high-performance engineering plastic Durethan®, the automotive industry is increasingly producing car body parts that can withstand the highest stresses and are up to 40 percent lighter than conventional parts, saving fuel and emissions. Reporting of environmental goals and data is available in the LANXESS Annual Report 2021, Corporate Responsibility section (pp 17-19), https://lanxess.com/en/Investors/Reporting
LANXESS has decided to have the environmental management of all its worldwide activities certified to ISO 14001. *** For general information, please see at www.lanxess.com - Company (e.g. Company Overview, Management/Organization), - Products & Solutions (e.g. Business Units, eBusiness incl. Terms & Conditions), - Media (e.g. Press Releases, Publications), - Investor Relations (e.g. Corporate Governance, Investor News, Publications, Shares), - Corporate Responsibility (e.g. CR News, approach, material topics and targets, SDGs, Certificates & Commitment) *** All data above as per May 15th. 2022. *** Forward-Looking Statements: The answers to the questions of the CDP contain forward-looking statements based on current assumptions and forecasts made by LANXESS AG management. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. Company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2021	December 31, 2021	No

C0.3

(C0.3) Select the countries/areas in which you operate.

Argentina
Australia
Belgium
Brazil
Canada
China
France
Germany
India
Italy
Japan
Mexico
Netherlands

Russian Federation
Singapore
South Africa
Taiwan, China
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 chosen approach for consolidating your GHG 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
Adipic acid

Bulk inorganic chemicals

Fertilizers

Other chemicals

Specialty chemicals
Specialty organic chemicals

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	DE0005470405
Yes, a SEDOL code	B1N8XZ3
Yes, a CUSIP number	D5032B102

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Chief Operating Officer (COO)	The highest level of direct responsibility for directives, strategies and programs with regard to energies and emissions and monitoring their attainment is assigned to LANXESS Chief Operating Officer, who is also part of the Board of Management. The COO sets up energy and emission reduction targets and strategies and supervises the Business Units in the implementation process and identifies the relevant reduction projects. Investment projects are then confirmed together with the CFO. After the decision in 2019 for LANXESS to become climate neutral until 2040 for scope 1 and 2, the COO initiated the Climate and Energy Sub-Committee, to manage and to harmonize the different work streams regarding CO2-topics.
Chief Financial Officer (CFO)	The Chief Financial Officer, who is also part of the Board of Management, is responsible to review the Corporate Risks and the corporate finance structure. This includes the heading of the Corporate Risk Committee (CRC). The Corporate Risk Committee takes over the main oversight function. It is responsible for the structure and implementation of the Group-wide Risk Management process. CRC is made up of senior executives. It analyses, validates and monitors the Group's risk profile as well as the key opportunities, risks and measures, including climate related risks and opportunities. After the decision in 2019 for LANXESS to become climate neutral until 2040 for scope 1 and 2, the CFO committed to invest up to 100m€ in for climate related projects until 2025.
Chief Executive Officer (CEO)	As climate change is a multidimensional issue, the highest level of direct responsibility lies within the Board of Management headed by the CEO of LANXESS. How is the Individuals responsibility related to climate issues? Strategic risks and/ or chances arising from climate change are discussed and monitored as part of the annual 'Strategic Portfolio Review' by the Board of

	Management and presented to the Supervisory Board. Outcomes are considered in the corporate business strategy of LANXESS. Example of a climate-related decision made by the individual/committee: End of 2019 the CEO, in consent with the Board decided new more ambitious CO2 reductions targets for LANXESS (25% scope 1 and 2 reductions until 2025, 50% reduction until 2030 and climate neutral until 2040 against base year 2018).

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding risk management policies Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Corporate Risk Committee plays a key role in identifying and assessing our climate risks. Headed by the chief financial officer, the committee is responsible for defining and implementing the Group-wide risk management process. It is made up of representatives from selected Group functions. One of its tasks is to analyse the principal climate-related opportunities and risks and their development from the viewpoint of the entire company. Its tasks also include examining measures to counter risks, initiating additional measures and, when necessary, instigating further analyses of individual opportunities and risks. Every year all strategic topics and measures were discussed by the board in a three-day workshop. One topic is always CO2 including actual progress against the new targets.
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans	The full Board of Management assesses the implementation of our climate strategy and all other climate issues three to four times a year during the meetings of the Sustainability Committee. Individual members of the Board of Management additionally chair the respective sub-committees. The Board of Management monitors strategic (business) risks and opportunities resulting from climate change in the course of the annual "Strategic Portfolio Review". The results are presented to the Supervisory Board and incorporated both in the Group and portfolio strategy as well as the business

	Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	strategy of LANXESS. The chief financial officer (CFO) is responsible for reviewing the business risks and the financial structure of the Group. This is done as part of the work of the Corporate Risk Committee, which reports both to the full Board of Management and to the Supervisory Board. Protection of the climate is also embedded in our internal investment policies (e.g. internal carbon price) so that we make sustainable investment decisions. All relevant investments decisions are assessed technically by the Investment Committee and approved by the full Board of Management. In 2019 the Board decided Lanxess-Climate-Neutral-2040-Strategy (25% scope 1 and 2 reduction until 2025, 50% reduction until 2030 and climate neutral until 2040 against base year 2018).
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Monitoring implementation and performance of objectives	LANXESS's Climate and Energy Sub-Committee is headed by the COO, who is part of the board or management. This sub-committee comprises the heads and experts of the Corporate Development, Corporate Controlling, PTSE (Production, Technology, Safety and Environment) and Global Procurement and Logistics Group functions as well as the heads of the business units that have an especially high carbon footprint. The committee manages and monitors our climate strategy and ensures that the reduction targets for 2025 and 2030 are achieved. To this end, it examines data on CO2e emissions and energy efficiency, reviews milestones in relevant projects and makes a pre-selection other measures to be implemented.
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Monitoring implementation and performance of objectives	Value Chain Circularity & Product Stewardship sub-committee is also headed by a member of the board of management. This sub-committee promotes sustainable products and value chains. It has set itself the goal of creating a product portfolio that is as climate-neutral and circular as possible. In the process, it looks beyond our 2040 climate strategy and also includes raw materials and scope 3 emissions in its considerations. The committee thus analyses our scope 3 emissions, makes decisions on

		the reduction strategy and initiates relevant projects. In addition, measures that promote circular value chains are driven forward. This committee also consists of heads and experts from relevant business units and Group functions as well as a member of the Board of Management.

C1.1d

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

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	Since the climate issue is particularly important for the chemical industry, which is very energy-intensive, the Executive Board has been dealing with this topic for years. As early as 2019, the Board of Management adopted the Lanxess-Climate-Neutral-2040-Strategy. Since LANXESS still had more than 3 million tonnes of CO2e at that time, the topic was and still is significant. So it was essential that the Board of Management dealt with climate paths, reduction options within LANXESS, reduction options in the environment, the economic framework conditions, etc. The COO has been working intensively on which processes can and must be optimised by when in order to achieve the interim targets on the path to climate neutrality in 2040, and has initiated changes to achieve them. After the decision in 2019 for LANXESS to become climate neutral until 2040 for scope 1 and 2, the COO initiated the Climate and Energy Sub-Committee, to manage and to harmonize the different work streams regarding CO2-topics. The CFO, who is also part of the Board of Management, was informed about the financial challenges that LANXESS will face in the course of the transformation. The CFO is responsible to review the Corporate Risks and the corporate finance structure. This includes the heading of the Corporate Risk Committee (CRC). The Corporate Risk Committee takes over the main oversight function. It is responsible for the structure and implementation of the Group-wide Risk Management process. CRC is made up of senior executives, analyses. It validates and monitors the Group's risk profile as well as the key opportunities, risks and measures, including climate related risks and opportunities. In the context regarding Lanxess-Climate-Neutral-2040-Strategy, the CEO discussed climate issues with other business leaders. As climate

		change is a multidimensional issue, the highest level of direct responsibility lies within the Board of Management headed by the CEO of LANXESS. Strategic risks and/ or chances arising from climate change are analysed and monitored as part of the annual 'Strategic Portfolio Review' by the Board of Management and presented to the Supervisory Board. Outcomes are considered in the corporate business strategy of LANXESS. All three Board Members, who decided about the Lanxess-Climate-Neutral-2040-Strategy, are still in charge.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Operating Officer (COO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other committee, please specify Climate and Energy Sub-Committee	Both assessing and managing climate-related risks and opportunities	Quarterly
Chief Financial Officer (CFO)	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).

Chief Operating Officer (COO):

The COO is a member of the Board of Management. The COO has the highest level of direct responsibility for LANXESS' operations. The COO also has the highest level of direct responsibility for directives, strategies and programs with regard to energies and emissions and monitoring their attainment is assigned to LANXESS Chief Operating Officer.

As climate protection has become one of the most important **corporate-wide issues**, responsibility for it has been assigned directly to the **COO.** The COO not only **chairs the Climate and Energy Sub-Committee** but the overall process for **eco efficiency incl. energy efficiency** and **emission reductions**. It is the everyday business of the COO to take care of energy efficiency and emission reductions especially in the case of investment decisions. In this respect the COO monitors and assesses climate related risks and opportunities brings them to the attention of the Board of Management on a regular basis. The COO monitors the

implementation of the energy and emission reduction strategies and the target achievements via the LANXESS HSE performance data. Results are analysed by the Energy Manager and Corporate Strategy department. The COO then brings the results to the attention of the Sustainability Committee. New measures are deducted according to the result.

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Climate and Energy Sub-Committee:
In order to pursue our sustainability goals even more consistently, a new committee structure was devised. The top decision-making body is the Sustainability Committee (a Board-level committee), which manages all key sustainability issues and includes all Board members. Five sub-committees report to the committee and deal with the focus topics of LANXESS's sustainability strategy. One of these sub-committees is LANXESS' Climate and Energy Sub-Committee. It is headed by the COO.
It comprises besides
- the heads of the Group Functions Corporate Development,
- Corporate Controlling,
- PTSE (Production, Technology, Safety and Environment) and
- Global Procurement and Logistics
- Communications and
- for special topics members from Business Units.
The Climate and Energy Sub-Committee has **responsibility for the implementation of Lanxess-Climate-Neutral-2040-Strategy** and the **achieving of the sub-targets for 2025 and 2030**. Therefore, it **reviews** the assessment and monitoring of **CO2e emissions and energy efficiency,** it assesses the timeliness and substance of the milestones in corporate projects and it **preselects the next corporate projects**.

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Chief Financial Officer (CFO):
The Chief Financial Officer is a member of the Board of Management and chairs the Corporate Risk Committee and supervises all LANXESS investment decisions in the Investment Committee.
The Chief Financial Officer chairs the Corporate Risk Committee and **supervises** all LANXESS **investment decisions** in the **Investment Committee**. As climate has become one of the most important corporate-wide issues, the CFO assesses and manages climate-related risks and opportunities on a regular basis and therefore more frequently than quarterly. The CFO **monitors** the **target** attainment for **energy and emission reductions** via the **HSE performance data** that are provided to him by the COO and proceeds with the approval of investment decisions accordingly.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment

Row 1	Yes	

C1.3a

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Board/Executive board	Monetary reward	Emissions reduction target	For the CEO/Executive Board the annual performance bonus as well as the long-term performance bonus is linked to the achievement of the climate/sustainability targets including GHG emission reduction and reduction of energy consumption. All board members are included in this bonus system. For the annual performance bonus up to 100% can be reduced in case the below mentioned climate targets are not meet. For the long term bonus 40% are linked to meeting the pre-defined CO2e emission target for 2024 (Sustainability Performance Plan). Climate targets 2015 - 2025: 1. Reduction of specific Scope1 CO2e emissions by 25% for the LANXESS Group by the end of 2025 (base date: December 31, 2015), 2. Reduction of specific Scope 2 CO2e emissions by 25% for the LANXESS Group by the end of 2025 (base date: December 31,2015), 3. Reduction of specific energy consumption by 25% for the LANXESS Group by the end of 2025 (base date: December 31, 2015), 4. Reduction of emissions of volatile organic compounds (NMVOC) by 25% for the LANXESS Group by the end of 2025 (base date: December 31, 2015). Besides that, LANXESS published further CO2e-Emission reduction goals in 2019.
Corporate executive team	Monetary reward	Energy reduction target	The Sustainability Performance Plan, that reflects 40% of the LTI, is also applicable for the Senior Management. So, 40% of the long term bonus is linked to meeting the pre-defined CO2e emission target for 2024. (global coverage 100%).
All employees	Monetary reward	Energy reduction project	For all other employee groups the incentive system is designed to reward outstanding individual performance including engagement for the climate

			targets via the individual performance portion of the annual incentive schema. Additionally there is a mechanism to evaluate the overall sustainability performance for an individual, a group, a site, a country and/or LANXESS at all and to reduce the annual performance payment in case of unsatisfying performance. Additionally to the LANXESS incentive scheme LANXESS incentivizes employees to generate ideas on how to improve the environmental footprint of LANXESS. These ideas are collected and evaluated through LANXESS' 'Idea Management System'. Employees are encouraged to submit ideas on how to improve production processes and save costs. In 2015, LANXESS further optimized the process and structure of the 'Idea Management System'. A new agreement with the works council, which became effective in 2015, includes a special incentive for ideas on new ways to reduce emissions throughout production processes. In 2021, employees submitted a total of 1,200 ideas, yielding total savings of 0.4 m€. A total of 0.3m€ was paid out to employees.

C2. Risks and opportunities

C2.1

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

Yes

C2.1a

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

	From (years)	To (years)	Comment
Short-term	0	1	Formally included in corporate risk and opportunities management.
Medium-term	1	10	Formally included in corporate risk and opportunities management.
Long-term	10	30	Formally included in corporate risk and opportunities management.

C2.1b

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

Substantive financial or strategic impacts are defined for several dimensions.
Each opportunity and risk is measured in three dimensions, thereof one quantitative and two qualitative dimensions:
a) Financial Impact (quantitative)
b) Impact on LANXESS' reputation (qualitative)
c) Impact on society and environment (qualitative)

a) Financial Impact:
Regarding Financial Impact, all opportunities and risks have a substantive financial or strategic impact, if they meet one of the following criteria:
i) Opportunities and risks which have more than €1 million expected EBITDA-impact after countermeasures
ii) Risks which have an expected EBITDA impact, that was reduced by more than €10 million through the implementation of countermeasures
iii) New opportunities or risks which have an expected impact of more than €5 million after measures must be reported ad-hoc
Opportunities and risks having an impact on several Business Units are aggregated for an evaluation of the impact on corporate level (e.g. low Rhine water).
These thresholds guarantee that the information is comprehensive and not just limited to material risks or risks that could jeopardize the future of the company as a going concern.

b+c) Impact on LANXESS' reputation and on society and environment:
If an opportunity or a risk is evaluated with highest ranking according to an assessment of senior management in category b) or c) it will be also marked as risk with substantive impact.

The assessment is qualitative and is divided into five different classes depending on the following criteria for b) & c):
-its impact on people and/or the environment,
-the possibility to remediate consequences and
-the geographical scope of the impact.

b) Categories of qualitative assessment of the impact on LANXESS's reputation :
No impact
Minor impact: Limited local complaint/perception, minimal impact on image, minimal change in stakeholder confidence
Moderate impact: Local media coverage, moderate impact on image, moderate change in stakeholder confidence
Major impact: National media coverage, significant impact on image, significant change in stakeholder confidence
Critical impact: International media coverage, dramatic impact on image, dramatic change in stakeholder confidence

c) Categories of qualitative assessment of the impact on society and environment :
No impact
Minor impact: Limited local impact on people/environment, impact remediable with low use of resources
Moderate impact: Considerable local impact on people/environment, impact remediable with moderate use of resources
Major impact: Regional or high local impact on people/environment, impact remediable with substantial use of resources
Critical impact: National impact on people/environment, non-remediable consequences (fatalities, loss of resources)

When assessing a risk with a potential impact on society and environment, a defined group of employees (PTSE, HR and COM) is automatically informed of this risk.
In addition, at the end of the group-wide risk assessment period, all risks that may have an impact on society and environment are reviewed in a defined working group before the risks are reported to and reviewed by the Corporate Risk Committee.

C2.2

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

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

The opportunity and risk management process is based on the COSO II standard and consists among others of the following process steps.

(1) Opportunity and Risk Identification:
Objective of the Identification process is the early detection and creation of transparency of material opportunities and risks, that could lead to a deviation from our targets.
Process: A risk catalogue is defined in order to systematize the collection of

opportunities and risks and to ensure that all material risks and opportunities are taken into account. It contains climate-related categories: e.g. "natural disaster, climate & weather", "environmental policy", “raw material, energy and water price”, "transport & logistics" and “environmental & societal concern”. Here also up- and downstream risks like low water on the Rhine leading to transportation issues of raw materials as well as for products can be identified. All users may report opportunities and risks in all risk categories. However, for clear responsibilities and to avoid duplications, for each risk category it is determined which organizational units are primarily responsible for identifying and assessing relevant risks. Risks can either be identified and assessed directly by the Risk Owner or alternatively by a Non-Risk Owner: Wherever a Group Function fulfils an evaluating function for a Business Unit, the Group Function must report matters which may result in deviations from the forecasted EBITDA. In this case, the Group Function assumes a Risk Identifier role. The Group Function needs to enter the risk in the Risk Management software, assign it to the concerned Business Unit as Risk Owner to assess the potential financial impact. The country organizations always have a Risk Identifier Role and assign all identified risks to the relevant Risk Owners for assessment and steering.

(2) Assessment process:
Short-, medium- and long-term opportunities and risks are assessed twice a year in the context of the forecasting and the target/planning process.
- (financial impact assessment): Opportunities and risks are potential deviations from set targets and are assessed in regard to their impact on the EBITDA or net income. For all effects above EBITDA in the profit and loss statement, only the EBITDA impact is assessed. For turnover risks, assumptions must be made about the margin. Cost effects are determined by multiplying estimated quantity with estimated price delta. For interest and tax effects, only the net income view is taken into account. Depending on the risk type, different calculation methods are applied. In addition, there are specialized committees on company level to oversee risks during the assessment process, e.g. Sustainability committee for environmental, energy and climate protection standards.
- (reputational impact assessment): In addition to the financial dimension, risk owners also assess the potential reputational impact on LANXESS for each risk and the potential impact on society and environment. These assessments are qualitative and classify the impact into five different categories in terms of damage on image/ stakeholder confidence/ expected media coverage (reputational risk dimension) and the in terms of geographical spread and the possibility of remediation the damage, respectively (societal risk dimension).

The Risk Owners submit the information in the Risk Management software, the responsible Risk Champions review and discuss the findings with their heads of department and approve the risks and opportunities in the Risk software. All opportunities and risks are then analysed and prioritized by Group Function Controlling. The Group Function Controlling compiles the top risks and opportunities (in terms of the expected financial impact as well as impact on LANXESS’ reputation and Impact on society & environment) together with the measures.

3) Response to Risk and Opp.

After the identification and assessment the Risk Owner determines the appropriate risk management strategy. The strategic measure follows the approaches of risk management:
a) limitation of risks / (exploitation of opportunity) by implementing measures that limit the risk, e.g. reduction of CO2 emissions;
b) transfer of risks, e.g. by divesting the affected asset;
c) setting up a provision and
d) acceptance of risk, the risk is accepted as the assessment and management process lead to the conclusion that the overall business strategy and objective is expected to be achieved despite the risk.
The appropriate approach is selected based on the risk appetite. The risk management takes place throughout the year as it is an ongoing task. Regular exchange on new development takes places in climate-related committees, e.g. the Sustainability Committee.
Process for reviewing the applied risk management measure: Twice a year (every 6 months) in the context of the forecasting and the targeting/planning in an official process all risks and opportunities are reported, The Corporate Risk Committee as the main oversight function analyses and validates if the key opportunities and risks and their development are properly managed from a group perspective.

Case study for Transitional risks and/or opportunities:
Situation: The number of customers considering sustainability-related information in their supply relationships (e.g. sustainability criteria in supplier performance reviews, sustainability characteristics of purchased products) is constantly increasing.
Task: The risk that these sustainability-sensitive customer will reduce their share of wallet of LANXESS products, if LANXESS doesn't constantly improve all significant sustainability KPIs at least as fast as LANXESS' competitors. This risk was (1) identified as part of the category “environmental & societal concern”.
Action: For the (2) assessment requests for the CDP Supply Chain were used as a proxy. Risk was derived by sales reduction of ~10% of these customers. This assessment was not complained by the Sustainability committee.
Result: As (3a) response to limit this risk a three-dimensional portfolio assessment had to be implemented to evaluate all LANXESS products regarding significant sustainability KPIs to find products with high improvement potential. Therefore (3b-d) are not necessary for this risk.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	//Relevance and inclusion of risk type: Since 2015 LANXESS carries out a global but country specific assessment twice per year asking for current changes in regulations as well as upcoming or anticipated regulations. Included are direct and indirect site-, operations-, supply

		chain-, product- and business-impacts related to the regulatory environment. Such impacts include financial, organizational and strategic implications as well as proposed measures. //Example: The anticipated increased or newly introduced pricing of GHG emissions in various countries LANXESS operates in are part of LANXESS' risk identification, evaluation and management process: Revision of the European Emission Trading System (ETS): 14 LANXESS operations are under the rule of the EU-ETS. The system will be revised periodically. There is a risk that during the next revisions the allocation rules for free industrial certificates may change and the allocation will fall below the level of the average of reduction scenarios that are currently discussed. The impact on the operational costs due to the changes in the ETS rules is calculated by the following methodology: The allocation of certificates according to the current ETS rules is compared to the potential new allocation rules for scope 1 as well as for scope 2 (steam consumption). In various scenarios the deltas in the amounts of allowances are multiplied with a bandwidth of potential future carbon prices.

Emerging regulation	Relevant, always included	//Relevance and inclusion of risk type: LANXESS carries out a country specific assessment per year, asking for current and upcoming regulations. Even anticipated developments are requested to be reported to corporate level from country level. Included are direct and indirect site-, operations-, supply chain-, product- and business-impacts related to the regulatory environment. Such impacts include financial, organizational and strategic implications including the recommended measures.
		//Example: The inconsistent implementation of CO2 pricing schemes worldwide is part of LANXESS' risk identification, evaluation and management process. Based on the climate protection agreement COP 21 regulations on CO2 pricing systems are expected to emerge in a large number of countries and regions. This may include new or tightened emission trading systems or carbon taxes or fees, respectively. A non-coordinated implementation of regional or national CO2 price systems in the area of the LANXESS sites with no adequate systems in the countries of LANXESS' competitors may affect the competitive position of LANXESS significantly by adding operational costs to solely the LANXESS sites. Currently a high risk is seen in the planned European national CO2 pricing system for the non-ETS-sectors parallel to the EU ETS and no adequate implementation of carbon-leakage measures to ensure competitiveness with countries like USA or China.
		//Inclusion in assessment process: Our public policy experts thoroughly monitor the global regulatory regimes and identify and assess the potential upcoming regulation. Our corporate strategy department

		incorporate it in the strategic tools of the LANXESS group. The business units incorporate the approaches in their business strategies.

Technology	Relevant, sometimes included	//Relevance and inclusion of risk type: Worldwide, low carbon regimes/economies are in the design phase, especially in Europe and China. LANXESS pursues its low carbon strategy to transition towards such low carbon economies. Outcome for the chemical industry will be the set-up of large scale, low carbon energy supply and storage as well as innovative technologies for energy efficient chemical production processes including those processes causing process emissions. Drivers are carbon trading and pricing regimes as well as a genuine interest of the chemical industry to be part of the solution for a future low carbon world. Chemical companies including LANXESS will have to thoroughly consider the best business and investment strategy, in order to invest the right technology in the right region according to the local regulatory environment with respect to carbon emissions and approaches to low carbon energy supply. It is a prerequisite in order to not be outperformed by other chemical players that invest in more cost efficient installations especially with stricter carbon emission reduction.
		//Example: Lanxess produces partly commoditized products, that can be produced with different processes, leading to different carbon footprints, like adipic acid. If we do not steadily improve our own processes, demand for our products will decrease especially in regions with higher CO2 awareness, if competitors sell the same product with lower carbon footprint. The risk is to lose up to 10% of revenue and margin, so it can be seen as substantial.
		//Inclusion in assessment process: The above mentioned assessment includes technical measures that are anticipated and measured against best available technology by country. Our manufacturing excellence team works as in house consultants and analyses site by site technological improvement potentials. Round about 50% of identified improvement potentials are energy-related. Our corporate strategy department identifies the best investment strategy.

Legal	Relevant, sometimes included	//Relevance and inclusion of risk type: LANXESS carries out a country specific assessment twice per year, asking for potential legal risks. Such legal risks are requested to be reported to corporate from country level. Included are climate change related legal risks. //Example: LANXESS installations are subject of the relevant emission trading schemes in Europe. There would be legal consequences if LANXESS was not in line with the requirements. Especially, this imposes the risk of payment of fines. We calculate the potential risk by multiplying our emissions in the EU ETS with a potential payment of fines e.g. 100€/t CO2 in Europe. Please note that this risk is very unlikely.

Market	Relevant, sometimes included	//Relevance and inclusion of risk type: As for climate change and the upcoming decarbonization, products of LANXESS will be needed to construct a low carbon society. The chemical industry is at the beginning of long value chains and provides the molecules for downstream markets. Therefore regulations and trends in these markets need to be thoroughly monitored. Especially the implementation of the European "Green Deal" that follows a low carbon ambition among other goals will change markets e.g. with respect to recycling. The chemical industry will provide the molecules required for closed chemical and technical loops in order to build carbon efficient economies. Chemical companies that do not manage to transform their portfolio will lose the related market share, e.g. in plastics or additives. LANXESS continuously identifies, assesses, evaluates and manages upcoming sustainability and low-carbon trends in its downstream markets.
		//Example: LANXESS needs to steer its product portfolio towards low carbon products and needs to identify the products that are recyclable and steer additives towards integration in recycling processes. Some of LANXESS High Performance Materials like Durethan ECO polyamide including fibres from waste glass can already be produced with recycled raw materials and more and more customers are asking especially for these products. If LANXESS doesn't follow this trend and change the processes towards recycled raw materials a significant part of revenue and margin of these products is at risk. Because LANXESS High Performance Materials are the main part of LANXESS Materials segment, this risk is substantial.
		//Inclusion in assessment process: The Business Units and country organizations continuously screen market development. Our strategy and policy department screens regulatory developments and the innovation department drives innovation strategies towards circular economy solutions.

Reputation	Relevant, always included	//Rationale: Our risk management includes an identification of reputational risks for every risk that has been identified. It is applied qualitatively by classifying the reputational impact into five different categories (in terms of change in stakeholder confidence and expected media coverage).
		//Example: New and especially young potential employees focus on the corporate responsibility / sustainability of an employer. If we fail to demonstrate that LANXESS is following a credible climate strategy and substantially reduces emissions as part of it, we will experience difficulties to recruit (young) employees.
		//Inclusion in assessment process: This risk is assessed qualitatively by our employer branding department. The department is in constant exchange with potential employees via recruiting events, media and stakeholder analyses and hiring processes.

Acute physical	Relevant, always included	//Relevance and inclusion of risk type: All relevant corporate functions are connected to the Incident Reporting System of LANXESS and thus are alerted as soon as the entry of a unit is becoming effective. Such Level 1 incidents are always triggering emergency plans and communication measures, coordinated by the appointed emergency response officer. In some cases a corporate crisis team is taking over, consisting of members of all relevant corporate functions.
		//Example: One of our Indian sites is located in an area that has been and will be subject to monsoon flooding as well as droughts and therefore can be subject to extreme weather events. Mitigation measures are in place in terms of technical installations that ensure that the site is not affected in its operations. Emergency plans are in place and revised annually.
		// Assessment : LANXESS' finance team and the HSEQ team assess the remaining risks in terms of potential capital damage, revenue losses by business interruptions etc. in order to ensure sufficient coverage of insurances.

Chronic physical	Relevant, sometimes included	//Relevance and inclusion of risk type: Changing climate patterns in longer-term shifts is one of the basic characteristics of climate change. LANXESS as a globally operating chemical company is and will be subject of these patterns like all economies and societies. Those climate patterns include precipitation changes, water scarcity, flooding and extreme weather conditions. They can lead to supply chain disruptions, e.g. through droughts and flooding and possible disruptions of waterways. Disruptions of waterways can influence our supply chain stability if alternative transports methods are not thoroughly planned.
		//Example: Changing climate patterns in Europe are expected to lead to more extreme weather events e.g. flooding of rivers or droughts during longer time periods than before. The LANXESS production sites in Leverkusen, Dormagen and Uerdingen are situated next to the river Rhine. Meteorological studies estimate that changing climate patterns can lead to longer lasting low water levels on the river Rhine that can require alternative distribution ways for our high-volume products as well as for LANXESS' raw materials. The risk is, that if shipping has to shut down due to low water level, alternatives will be short and expensive very quickly, because LANXESS competitors would facing the same problem. Worst case would be a shutdown of production.
		//Inclusion in assessment process: Our strategy department as well as our production and technology department closely monitor official documents and accepted risk filters, e.g. the WWF water risk filter or WRI´s Aqueduct Global Water Tool to identify and assess the relevance and the potential impact of changing climate patterns to our company e.g. the sites situated next to the river Rhine. The impact is identified and assessed on a mixed quantitative and qualitative basis.

		Outcomes of the identification and assessment process are included in our business strategy planning, our site and asset management strategies as well as supply chain management. Our supply chain management closely monitors upcoming weather situations and assesses whether they might lead to supply chain disruptions, e.g. through droughts of rivers. As a consequence they thoroughly adapt supply chain structures e.g. by switching to intermodal transport systems.

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?

Downstream

Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

Based on the climate protection agreement COP 21, regulations on CO2 pricing systems are expected to emerge in a number of countries and regions, especially Europe. This may include new or tightened emission trading schemes, carbon taxes or carbon fees, respectively. Some member states of the EU consider a carbon tax except for those plants that are already regulated by the European Emission Trading Scheme.

Currently the highest risk is seen in an EU-wide implementation of a CO2 tax/fee/ETS system covering all emissions and no adequate implementation of such taxes in countries like USA or China. This is especially harming if the EU or Germany will refrain from Carbon Border Adjustment Mechanism, CBAM. CBAM is a target of the new EU Commission, however it is still a concept. The problem is mainly the currently limited WTO compatibility. So the risk is that the EU decides on tightening to the ETS/ CO2-tax system without having clarity on the CBAM. The EU's pioneering role in the Green Deal

can lead to a distortion of competitive conditions compared to the rest of the world because well-intentioned equalisation mechanisms such as the CBAM cannot be implemented internationally.

LANXESS has a major footprint in Europe, with about 50% of Net Sales, 65% of employees and 75% of Capex, but only 14 of the plants and sites are subject to European emissions trading, covering only ~40% of LANXESS' Scope 1 emissions. Due to accelerating pressure coming along with the Green Deal pushing the European countries towards emissions reduction, there is especially for Lanxess with its heavy footprint in the EU an increasing risk of losing competitiveness by un-coordinated CO2 regulations against players in less regulated regions.

One aspect of this risk is that operational costs could negatively affect the financial results of LANXESS. If competitors of LANXESS produce the same products as LANXESS in countries with no adequate CO2 tax price systems, there is a risk that LANXESS will not be able to pass over these additional costs to customers. As a consequence, our EBITDA would decrease accordingly and revenue would be reduced.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

16,000,000

Potential financial impact figure – maximum (currency)

32,000,000

Explanation of financial impact figure

The method to estimate the financial impact of regional/national carbon price systems is based on the scope 1 emissions of LANXESS within the EU but outside the EU-ETS, i.e. 320 kt CO2e (Total Scope 1 emissions in Europe [810kt] minus verified EU ETS emissions [490kt]) in the EU multiplied by the level of a regional or national CO2 tax price, i.e. to be 50 - 100 €/t in 2030. This assumption is based on the ETS price development seen in 2021. This leads to potential additional costs of some 16– 32m€ p.a.

Calculation :

810 kt -490 kt= 320 kt
320 kt * 50 €/t = 16 m€
320 kt * 100 €/t = 32 m€

Cost of response to risk

20,000,000

Description of response and explanation of cost calculation

LANXESS is pursuing its ambitious emission reduction pathway with two general concepts:
a) improving energy efficiency and
b) major reduction projects based on technology development.

Further LANXESS' political relations assesses drafts for CO2 pricing schemes in the countries. LANXESS provides input to transition pathways. This will enable the regulator to set up smart CO2 regimes.

Example:
Situation: To continue manufacturing products at the Leverkusen Verbund site that are both cost competitive and have a low CO2 footprint, production must be continuously optimized.
Task: The energy consumption of NHF (Nitriding Hydrogenation Fractionation) plant, which is an essential component of the Verbund site, should be further optimised.
Action: In the NHF plant there are strippers in which unwanted substances, the vapours, are extracted. LANXESS started a project, so that the energy of the vapours can now be used to reduce the energy of the low-boiling column and thus optimise the overall energy consumption.
Result: About 5,000 MWh can be saved by this project per year. About 500 k€ investment was needed for the project.
Timescale of this project: This project is already implemented and the Savings will support our operating profit every year. There is no plan to shut this plant down in the future.

Cost of Calculation:
In the context of the LANXESS Climate Neutral 2040 strategy, LANXESS will invest 100 m€ in climate protection projects by 2025. This results in a total of up to 20,000,000 € per year for climate protection projects.
Calculation : 100 m€ / 5 years = 20 m€/year
These projects include both the energy efficiency projects mentioned under 1a) and those under 1b) technology development, which will result in new plants or plant modifications. In addition to this risk, also other risks are also minimized with this investment. It is therefore not possible to precisely allocate the sum to the individual risks.
The political relations mentioned above are rather insignificant in terms of costs compared to the 20,000,000€ both in terms of absolute amount and fluctuation in the individual years and can therefore be neglected.
Timescale of this project: 100m€ capex will be spent until 2025. Energy efficiency is an

permanent topic. The employees for political relations are already hired and this position is not limited in time.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Technology

Transitioning to lower emissions technology

Primary potential financial impact

Increased capital expenditures

Company-specific description

Worldwide, low carbon regimes/economies are in the design phase, especially in Europe and China. LANXESS pursues its low carbon strategy to transition towards such low carbon economies. Target for the chemical industry will be a set-up of, among others, innovative technologies for energy/resource efficient chemical production processes including those processes causing process emissions. Drivers are carbon trading and pricing regimes as well as a genuine interest of the chemical industry to be part of the solution for a future low carbon world. New technologies need to be invented and implemented. Chemical companies including LANXESS will have to thoroughly consider the best innovation strategy in order to invest expenditures for research and development into the right technology. It is of vital interest to invest in the most efficient low carbon technologies in order to not be outperformed by competitors using better processes and to not lose pace. This is relevant because the necessary technologies to transform the chemical industry into a low carbon industry are not readily available. Therefore low carbon solutions require a high amount of R&D invest. Some technological challenges are of general nature and very similar among the different players in the chemical industry. Due to its size compared to the large corporations on the one hand and its differentiated product and process portfolio on the other, it does not make sense for LANXESS to conduct the necessary process and technology developments alone.
Therefore, for those challenges, it is of advantage to collaborate in consortia to get expertise you can't buy, to be faster in process and technology development and to dilute costs. There is a risk that we will not partner up with the right innovation partners and therefore having the major new technologies later as our competitors. As a consequence the higher cost would harm the profitability and competitiveness of LANXESS.

Example: Zero carbon energy supply of Verbund sites will require several innovative

approaches that are currently developed by the chemical industry, e.g. electrified thermal off-gas treatment. Innovative solutions will be addressed in collaborations with other chemical players in order to be fast enough for a sufficient and timely low carbon transition and to adapt the relevant global chemical value chains.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

13,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Maximum amount at risk is 13m€/a. The impact is derived from expert interviews. This includes additional staff (~3m€), external collaboration (~5m€) and third party research services (~5m€). The sum of these three points ends up in the amounts that would have to be reinvested into additional R&D investments in order to be on track.

Calculation:
3 m€ + 5 m€ + 5 m€ = 13 m€

Cost of response to risk

600,000

Description of response and explanation of cost calculation

LANXESS pursues innovation and collaboration approaches:
a) Innovation Technology scouting, strict stage gate processes and technology benchmarking: The comparison of process alternatives ensures the selection of the best, cost efficient and low carbon production processes.
b) Collaboration steering: Relevant collaboration forums and initiatives ensure that collaboration with other chemical players take places.

Case Study:
Situation: In order to find the right partners, the first essential step is to have a group-wide overview of the existing technologies as well as the necessary steps to improve the technologies in order to sensibly search for the options that promise the greatest benefit.

Task: A so called 'Innovation community', comprising innovation experts from Group Functions as well as from the different business units, had to be built up to share actual status of LANXESS processes and to bundle and assess process-innovation-requirements.
Action: The Innovation Community set up by Group function Corporate Development has set itself the task of identifying innovations within the community and for the benefit of the company and providing expert support for implementation. Generally, one representative from each business unit as well as selected experts from the Group Functions Production, Technology, Safety and Environment (PTSE), Legal and Compliance (LEX) and dLX (Group function to implement digitalization) meet for this purpose. The Innovation Community meets three times a year to discuss amongst others relevant climate related topics and opportunities.
Result: A series of low carbon emitting technologies (e.g. two major cooperation programs regarding recycling technologies for plastics with additives) were discussed and evaluated.
Timescale of this project: Innovation community is already implemented and not limited in time.

Cost of Management:
Costs include compensation of the relevant innovation experts of our innovation and technology departments (cost of ~€150,000 each p.a.) times the amount of time required. It was taken into account that employees from Group function Corporate Development participate to a greater extent of their working time in the innovation community than the numerous employees of the business units and other Group functions. In total ~4 employees with average costs of 150 k€ p.a.

Calculation:
150,000 €/year * 4 = 600,000 €

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

Since 2021 there is a legislative framework of a greenhouse gas pricing system (BEHG) in Germany additional to the existing European emission trading system (ETS). The BEHG taxes fuels used outside plants covered by the ETS. There is a risk of widening the scope from 2023 on substitutes like waste. At present, the production residues in the Chemparcs in Leverkusen, Krefeld and Dormagen are delivered to a hazardous waste incineration plant, from which steam is in turn delivered to the production facilities. A CO2 tax on this hazardous waste would ultimately make steam delivery more expensive. In order to protect production plants in international competition, the national legislator has generally implemented carbon leakage relief. As Mid Case scenario a partial of 50% of the costs can be refund with an application for Carbon Leakage within the BEHG (Brennstoffemissionshandelsgesetz) Carbon Leakage Verordnung.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

5,800,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Assumption for the maximum impact would be, that total waste amount would be charged with a CO2-tax. It was calculated by multiplying the estimated waste amount from the Chempark sites of 60.000 t for 2022 with a carbon content of 60% with its CO2-freight and the CO2-tax in 2023.
Calculation:
60.000 t * 0,6 * 3,6 * 45 €/t = 5,8m€

Cost of response to risk

150,000

Description of response and explanation of cost calculation

To mitigate the risk of a future loss of the competitiveness protection rules for renewable LANXESS uses the following strategy:
1) LANXESS is researching to increase our resource efficiency and thus reduce the

amount of waste,
2) LANXESS is researching for new recycling processes such as chemical recycling to find alternative solutions for the waste streams and
3) LANXESS generates awareness of the regulatory risk though dialogue with political stakeholders.

Example:
Situation: It is requested by political leaders to understand the relevance of reducing waste production and implement carbon cycles. This topic is significant for LANXESS, since the residues from chemical production is hazardous waste, that can´t be recycled and only delivered to hazardous waste incineration plants.
Task: It is the task of our political department to explain that there aren´t alternatives to reduce the CO2-tax burden from widening the scope to hazardous residues from chemical production.
Action: LANXESS works together in working groups of the Germany Chemical Association VCI and elaborates papers to explain the negative impact to political leaders. The impact would be, that energy intensive companies like LANXESS would have a significant cost disadvantage compared to global competitors outside Germany.
Result: As a consequence of the political dialogue the federal ministry of economic and climate considers exemptions for hazardous waste incineration.
Timescale: LANXESS is already part of working groups of the Germany Chemical Association VCI. As the CO2 topic will stay important, this collaboration is not limited in time.

Cost of Management:
Cost for 1) and 2) include compensation of the relevant innovation experts of our innovation and technology departments as well as experts from corporate development. costs for 3) include compensation of our communication experts. In total for this measure ~one Full Time Equivalent (FTE) is required derived from the FTE shares of the different departments with average costs of 150 k€ p.a.

Calculation:
150,000 €/year * 1 = 150,000 €

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Market
Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

LANXESS supplies products to numerous customers almost worldwide. The number of customers considering sustainability-related information in their supply relationships (e.g. sustainability criteria in supplier performance reviews, sustainability characteristics of purchased products) is constantly increasing. This number of companies requesting data via CDP supply chain grew above 85% in the last year. Given LANXESS significant corporate carbon footprint and its portfolio comprising products with a high GHG intensity (e.g. caprolactam, adipic acid or high-value chemicals), company engagement and performance in climate protection is a typical area of consideration within sustainability. For example, several major customers of LANXESS, representing about 7% of our sales, requested information on our climate protection activities through the CDP Supply Chain Program in 2022. Lack of corporate engagement and performance in this area (e.g. receiving a low score in supplier performance reviews, limited ability to address customer-specific questions on climate-related topics around purchased products) poses a risk to impact the customer relationship such that LANXESS products face lower demand or even get delisted completely by the customer.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

53,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

LANXESS estimates the impact of changing customer behaviour to be substantial. For example, if the customers requesting information on our climate protection activities through the CDP Supply Chain Program (customers with CDP Supply Chain request representing 7% of our sales in 2021 of 7,557m€) reduce demand by 10% (our estimation) due to a low CDP score this would result in loss of sales in the order of 49m€ p.a.

Calculation:
7,557m€ x 10% * 7% = 53m€

Cost of response to risk

20,750,000

Description of response and explanation of cost calculation

LANXESS attempts to minimize this risk through two measures.
1) As part of the Climate Neutral 2040 Strategy, LANXESS is investing up to 100m€ by 2025 in climate-related projects to reduce the PCF of many products overall.
2) LANXESS exchanges with customers (e.g. bilateral discussions, supplier performance reviews, CDP Supply Chain program) on its carbon footprint, climate protection strategy & measures – information which is also reported transparently through public media (e.g. Annual Report, website). Further, customer-specific requests related to climate are addressed. In this context the '3 dimensional product portfolio sustainability assessment' was implemented, as the following case study illustrates.

Case study:
Situation: Sustainability figures, especially CO2 emissions, are becoming more and more important. It is becoming important to be able to evaluate and communicate these figures not only at Group level but also at product level.
Task: Upgrade portfolio assessment to be able to analyse sustainability issues and figures to get to more sustainable product portfolio.
Action: LANXESS established a '3 dimensional product portfolio sustainability assessment'. There, the portfolio was assessed in terms of economic, environmental and social sustainability.
Result: This enables us to strengthen products that have a significant positive environmental effect and to identify products, like Durethan ECO polyamide featuring fibres from waste glass, with a high potential to green-house gas emission reduction.
Timescale: Employees are hired, product portfolio assessment not limited in time.

Explanation of cost:
In the context of the LANXESS Climate Neutral 2040 strategy, Lanxess will invest 100 m€ in climate protection projects by 2025. This results in a total of up to 20,000,000€ per year for climate protection projects. These projects include the energy efficiency projects mentioned under 1). In addition to this risk, also other risks are also minimized with this investment. It is therefore not possible to precisely allocate the sum to the individual risks.
Regarding 2) ~5 employees (cost of ~€150,000 each p.a.) in corporate units are dedicated to support the customer dialogue on sustainability, including climate change. Contributions by marketing managers in business units result in no specific additional costs as they are covered by their standard budgets.

Calculation :
20mio€ + 5 * 150,000€ = 20,750,000€

Comment

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Today there are more than 1.2 billion vehicles on the roads globally, and over 900 million of them are passenger cars. This figure is expected to rise to two billion by 2035, driven by continuously rising mobility needs especially in emerging markets. Transportation-related emissions of CO2, pollutants and noise are increasing. Therefore enabling mobility with less to no emissions is a key opportunity to provide added value to society. One relevant option is to reduce the weight of cars and trucks as much as possible. LANXESS' lightweight polymer high-tech plastics and composites like Tepex are applied in countless vehicle parts and lead to lighter vehicles which require less energy input. With our Tepex grade family we produce high performance composite laminate systems made with thermoplastic polymers. The innovative combination of continuous reinforcing fibres with thermoplastic polymers results in exceptionally high strength and rigidity, coupled with extremely low weight. Tepex enables cost-effective parts fabrication processes suitable for mass-production, especially in combination with injection moulding. This not only poses a significant business opportunity for LANXESS, but reduces the emissions. Example: A "typical" substitution of 130 - 200 kg of steal in a car like a VW Golf goes along with a weight reduction of 100 - 170 kg. 100 kg less weight, equals 0,5 l/100 km driven or 11,7 g less CO2.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

30,000,000

Potential financial impact figure – maximum (currency)

90,000,000

Explanation of financial impact figure

The opportunity is expected to add an additional sales volume for engineering plastics increasing sales by approximately 30-90m€ per year. The calculation is based on a selected set of parts which will be substituted in the next years by engineering plastics. The set of parts are multiplied by the estimated number of produced cars and then multiplied by the actual share of wallet from LANXESS at the relevant car manufactures. This leads to 20-30 kt of material multiplied with the relevant prices (1.50-3.00€/kg), leading to approximately 30-90m€ additional sales per annum.

Calculation :
Minimum:
20kt *1.50€/kg =30mio€
Maximum:
30kt * 3.00€/kg=90mio€

Cost to realize opportunity

1,300,000

Strategy to realize opportunity and explanation of cost calculation

LANXESS assessed both the market dynamics and the key technology developments. Together with the major car manufactures we develop new lightweight solutions for selected components of the car. To drive this opportunity LANXESS has installed dedicated teams comprising R&D and application development specialists in every region, with a know-how hub in Europe serving the other R&D and application development teams globally. To realize this opportunity (development of the selected car components) LANXESS will add additional resources, especially R&D headcount.
Case Study:
Situation: In the upcoming years LANXESS will focus on lightweight solutions for new mobility solutions. In order for the market to be aware of LANXESS product solutions, clear marketing concepts and exchange of information with experts of our customer industries are required.

Task: LANXESS will provide thriving opportunities to intensify the contact with customer industries and generate new business opportunities, e.g. regarding new mobility. Low weight products will be very important to drive the change towards new mobility.
Action: LANXESS participates at big exhibitions like the K in Düsseldorf and provides experts events on how our engineering plastics comply with new mobility concepts.
Result: The respective Business Units, especially High Performance Materials, was able to sign new customer contracts for car parts for engineering plastics.
Timescale: The employees are already hired, the technical equipment is already in place and we are trying to catch this opportunity until 2025.

Cost to realize opportunity: The additional resources required to leverage the opportunities amount to approximately 1.3m€. This refers to additional headcounts [~300.000€; calculated as average personal cost per employee (150.000€ p.a. on average) times average working time for this opportunity] as well as technical equipment [~1.000.000 in sum for several investments].

Calculation :
300,000€ + 1,000,000€ = 1,300,000€

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased revenues through access to new and emerging markets

Company-specific description
LANXESS continuously identifies, assesses, evaluates and manages upcoming sustainability and low-carbon trends in its downstream markets. The low carbon energy transition requires energy storage technologies to store energy generated by renewable energies and allow for electro-mobility. To enable affordable energy storage technology new and advanced battery technologies have to be developed – ideally based on cost competitive available components.
Lithium-ion batteries play a key role in future technology solutions for mobility, energy storage and consumer electronics. The trend towards electro-mobility is driving investment in the mass production of battery cells. Europe will account for up to a third

of global production capacity for battery cells by 2025. The local demand for processed chemicals and materials, which account for approx. 60-70% of total battery cell costs, is correspondingly high.
LANXESS is one of the leading manufacturers of hydrofluoric acid and phosphorus chemicals, two important starting materials for lithium hexafluorophosphate (LiPF6), which acts as a conductive salt in electrolytes for lithium-ion cells. Due to the massive build-up of production capacities for lithium-ion batteries in Europe, the demand for this important electrolyte component will also grow strongly. With this integrated raw material base, we can ensure the supply of a LiPF6 and electrolyte production in Europe.
LANXESS also believes it is well positioned to meet the growing demand for lithium for battery chemicals, because LANXESS has unique strategic position at Chempark Leverkusen for the setup of a local LiPF6 production. LANXESS offers key raw materials and an integrated asset structure for electrolyte and LiPF6 manufacturers to establish a local LiPF6 production in EU and has recently started a cooperation with TINC, a globally leading manufacturer of electrolytes, and will produce electrolytes in Leverkusen by 2022. Furthermore, LANXESS cooperates with the Canadian company Standard Lithium Ltd. for the commercial production of battery-compatible lithium from the brine that LANXESS is mining in El Dorado, Arkansas, USA, to produce bromine products. Standard Lithium has developed an innovative process for extracting high-purity lithium directly from brine. A next step is a Front End Engineering Design (FEED) Study to evaluate the potential construction of a first industrial plant for lithium carbonate production.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

50,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

With the rapid growth of electric vehicles, the total demand for Lithium-Ion batteries in Europe is expected to reach close to 300 GWh in 2025 and more than 700 GWh in 2030. Major cell manufacturers have started to ramp-up cell production sites in Europe and a total cell capacity of ~255 GWh will be build up until 2025. According to the VCI

the value for battery materials is expected to grow to approx. 10bn€ by 2025 including chemicals for electrolyte, cathode, anode and separator. According to Avicenne Energy and Deutsche Bank electrolytes represent ca. 10-15% of these revenues. Thereof ~50% is for the electrolyte salt LiPF6 – the key ingredient in electrolyte formulations. Taking a margin of 30% for the electrolytes manufacturer into account and 80% raw material cost for electrolytes manufacturer, the raw materials for electrolyte salt (LiPF6) will have a value of approx. 350m€ in Europe.

Calculation
10bn€ x 12,5% x 50% x (1-30%) x 80%= 350m€

LANXESS is backwards integrated and can significantly participate in the LiPF6 production with the key raw materials hydrofluoric acid, phosphorous chemicals and Li-chemicals. LANXESS is well positioned and has an integrated asset network, so a ~15% market share of the ~350m€ of raw materials in Europe, leading to ~50m€ sales, seems to be a realistic opportunity.

Calculation: 15% * 350 m€ ~ 50 m€

Cost to realize opportunity

500,000

Strategy to realize opportunity and explanation of cost calculation

Strategy to realize Opportunity:
As of January 2021, the new LANXESS group initiative for Electromobility and Circular Economy is operational. Its primary task is to generate additional sales in the field of electromobility by addressing cross-functional growth projects, leveraging new business opportunities and driving innovation projects in the field of battery technology. The initiative currently employees four full-time employees.

Cost to realize opportunity:
The Initiative creates costs of ~0.5m€ p.a. This includes mainly the personnel costs of the 4 employees.

Calculation:
4 employees* 125,000€ p.a. = 500,000€

Case study:
Situation: LANXESS will drive the opportunity with thorough focus to create additional sales especially for new mobility sector, i.e. LIPF6 for batteries.
Task: In order to have a cross functional approach the cross functional unit is working on new concepts for innovation and marketing in battery technology. One task was to find partner to become an important on the Battery market.
Action: The newly created business development positions analyse the different technologies and market players like TINC and coordinate the R&D activities and go-to market approaches of the different business units. In the materials business unit additionally a specialised development team has been installed to work together with the

selected OEMs for the automotive industry to design new components.
Result: LANXESS was able to generate new contracts for battery technologies.
Timescale: The employees are already hired and we are trying to catch this opportunity until 2030.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of climate adaptation, resilience and insurance risk solutions

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
Regarding climate adaptation increased water stress in many regions and countries is a direct consequence of climate change. Opportunities and not only challenges can be found in water scarcity and pollution. Experts estimate the annual water demand to reach 6,900 bn m^3 in 2030, creating a shortfall of 2,700 bn m^3. Contamination of water supplies is increasing at the same time due to an increasing rate of urbanization and water scarcity due to climate change. The need for safe drinking water is increasing as municipal sources vary from rivers to underground water to seawater along coastal areas. All these sources are often polluted and contain a significant amount of dissolved metals. This global water supply gap of approx. 40 % creates a business opportunity for LANXESS, as solution provider for water treatment and water extraction technologies. LANXESS produces already ion exchange resins for water treatment with its Business Unit Liquid Purification Technologies (LPT). The market for ion exchange resins will grow at a CAGR of 4% from 2019-2024, with higher growth rates for the specialty segments. As shown in several market studies the ion exchange market will increase from 1.6bn€ in 2019 to 1.9bn€ in 2024. LANXESS's approach is win a significant share of this additional sales of ~300m€ per annum.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

45,000,000

Potential financial impact figure – maximum (currency)

90,000,000

Explanation of financial impact figure

The market for ion exchange resins will grow at a CAGR of 4% from 2019-2024, with higher growth rates for the specialty segment. This will increase the market from 1.6bn€ in 2019 to 1.9bn€ in 2024. leading to additional 300m€ Sales per Year.
Calculation: 1,900m€-1,600m€= 300m€

LANXESS is a relevant player in the ion exchange resins market. The mentioned growth is based on feasibility studies. If LANXESS manages to generate 15%-30% of this growth, which seems to be not unrealistic due to the expected new plant with in the range of 80-120m€ invest, this would lead to a sales increase of 45-90m€ per annum.

Calculation:
Min: 15%*300m€ = 45m€
Max: 30%*300m€ =90m€

Cost to realize opportunity

100,000,000

Strategy to realize opportunity and explanation of cost calculation

To accompany this fast market growth and to gain a significant share of this growth, LANXESS invested in R&D collaborations with educational scientific institutes and R&D cooperation with customer and plans increase its production capacities for ion exchange resins and s as illustrated in following Case Study:

Example: Situation: The demand for products to implement water purification is increasing by ~4% p.a. The market for LANXESS specialty products like the Lewatit ion exchange resins, which are also used for microelectronics markets, is increasing even more.
Task: LANXESS is to expand its production capacities in order to serve the demand for water purification products.
Action: LANXESS launched a project in 2019 that analysed the markets in the individual regions in terms of supply demand development, growth potential and differentiation by product group. It also looked at various countries and sites where a new plant could be

built.
Result: LANXESS announced in 2020, that it is currently planning to build a new production facility, for which it plans to invest between 80m€ and 120m€ in the coming years.
Timescale: We have worked out the details for the plant and we are trying to catch this opportunity in this decade.

Cost to realize opportunity: LANXESS will continue to expand its business with ion exchange resins in the future. LANXESS is currently planning to build a new production facility, for which it plans to invest between 80m€ and 120m€ in the coming years. The cost of the R&D activities is not significant compared to the high amount of the investment sum for the new plant. In addition, due to the early planning phase, the investment sum is still subject to high fluctuations. Therefore, the costs here were calculated with the average of the 80m€ as minimum and the 120m€ as maximum for the investment sum for the new plant.

Comment

C3. Business Strategy

C3.1

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

Row 1

Transition plan

Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan

Yes

Mechanism by which feedback is collected from shareholders on your transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

We have several mechanism in place:

1) The various parts of the transition plan are part of the annual report. This can be critically questioned and discussed at the annual general meeting of shareholders.
2) The current strategy is discussed annually with the Supervisory Board. The climate targets and the climate path are an integral part of this.

Frequency of feedback collection

Annually

Attach any relevant documents which detail your transition plan (optional)

LANXESS Background Paper Climate.pdf

C3.2

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

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

C3.2a

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios Customized publicly available transition scenario	Company-wide	1.6ºC – 2ºC	Transition scenarios: We used the nationally determined contributions (NDCs), that are used as basis for the EU discussions of the Green Deal. Lifetime: Almost all of our assets and activities have unlimited lifetime with no predefined end, because we are always developing new products which can be also produced in our plants. We are steadily working on our product applications to improve the fit to newest market developments. Further we spend a significant amount of maintenance capex to keep all asset up to date. Therefore, we analysed for all our assets short-, medium as well as long-term horizons. Upstream, own operations, downstream: Main focus of this analysis are our own operations. Since we have a very high number for supplier as well as customer it is nearly impossible to analyse each and every value chain. Nevertheless by taking endmarkets and countries of our customer and regions of our main supplier into account for analysing the CO2 reduction sensitivity, we have started to analysing climate risks for our value chains, upstream as well as downstream. Market Conditions / Legislation: We analysed the

			necessary emissions reductions and linked costs for the next years and decades for our plants under the ETS as well as for the other plants based on the different carbon prices: Our expectations for carbon prices in the different countries and years were based on the respective scenario, the most recent publications and laws and directives that have already been passed. Geographical tailoring of transition impacts: For the different regions we have different assumptions regarding CO2-prices and regulatory requirements. In the EU for example we expected a significant faster transition towards low carbon economy due to the EU green deal and Fit for 55. Energy demand and mix: development of Energy demand mix in line with assumptions of the scenario.
Physical climate scenarios RCP 4.5	Company-wide		Physical climate risks in general: Upstream, own operations, downstream: Main focus of this analysis are our own operations. Since we have a very high number for supplier as well as customer it is nearly impossible to analyse every value chain. Nevertheless by analysing the risk of drought leading to low water level of the Rhine causing significant issues in the value chain, upstream as well as downstream, we have started analysing climate risks for our value chains. Lifetime: Almost all of our assets and activities have unlimited lifetime with no predefined end, because we are always developing new products which can be also produced in our plants. We are steadily working on our product applications to improve the fit to newest market developments. Further we spend a significant amount of maintenance capex to keep all asset up to date. Therefore, we analysed for all our assets short-, medium as well as long-term horizons. Product margins: We calculated the margin loss based on constant actual product prices and margins.

Physical climate scenarios RCP 8.5	Company-wide		Physical climate risks: Additional scenario and parameter for single physical climate risks like e.g. Water risks: Tools: We used the credible, publicly available tools WRI Aqueduct and WWF Water Risk Filter for assessing future water risks in relation to climate scenarios. Both tools combine different climate scenarios (IPCC Representative Concentration Pathways - RCP and IIASA Shared Socioeconomic Pathways - SSP) to explore future water risks. Time Horizon: The most important scenario used is the assessment of future water stress in a 10 years perspective. Applied scenarios: The "pessimistic" scenario (SSP3 RCP8.5) represents a fragmented world with uneven economic development, higher population growth, lower GDP growth, and a lower rate of urbanization, all of which potentially affect water usage; and steadily rising global carbon emissions, with CO2 concentrations reaching ~1370 ppm by 2100 and global mean temperatures increasing by 2.6–4.8°C relative to 1986–2005 levels. Upstream, own operations, downstream: Main focus of this analysis are our own operations. Since we have a very high number for supplier as well as customer it is nearly impossible to analyse every value chain. Nevertheless by analysing the risk of drought leading to low water level of the Rhine causing significant issues in the value chain, upstream as well as downstream, we have started to analysing climate risks for our value chains.

C3.2b

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

Row 1

Focal questions

Focal Question regarding physical scenarios:
e.g. Water:
All LANXESS production sites are assessed once a year. Last assessment was done based on 2021 data. The assessment should answer the question, which sites bears that greatest water risk, because for these sites, a strategy is needed to improve water situation.
Rational for selecting scenario:
Relatively long periods of time are often considered for physical climate risks, often up to 2100. Since the water risk appears to be increasing rapidly due to the increasing number of catastrophes, we have chosen a short 10-year period.
Since the result should be to identify the relevant locations that may require a strategy to improve the water situation, a relatively pessimistic scenario was chosen in order to obtain as comprehensive a picture of the risks as possible.

Focal Question regarding transition scenarios:
With the scenario analysis for transitional climate risks, we wanted to understand the implications of the different transition speeds in the individual regions and what the main drivers for the different transition speeds are.

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

Regarding physical scenarios:
e.g. Water:

The different Business Units have different production processes with different water requirements. Further the regions of our sites worldwide have very different water stress level. According to the WWF, 14 sites are located in areas with high to very high water stress. The combination of current and future water stress and water withdrawal per ton of product is used to identify production sites with the highest potential risk. Using this assessment, we have determined four water risk sites, namely Jhagadia (India), Latina (Italy), Nagda (India) and Qingdao (China).
A high water stress score indicates that much of the available and accessible fresh water is needed to meet human and ecological demands. Increasing water stress might increase the risk of water supply shortages. As a chemicals company, we mainly rely on water for cooling (81 %) and process purposes (17 %). Extreme water scarcity situations could lead to serious impacts on production volumes or even shutdowns of plants. In addition, stricter regulations, such as withdrawal permits, can be expected. Another risk is that the changes in regulations will occur in shorter periods of time. Necessary adjustments to processes and management would have to be made under great time pressure, which is a potential risk for LANXESS.
As a consequence, a high water stress score requires an even more responsible use of water. The less water a site withdraws for production, the lower the risk posed by water scarcity. For that reason the indicator specific water withdrawal per ton of product is very important.
The assessment of water stress and other water related risk indicators and scenarios was the basis for the development of the LANXESS Water Program. Targets and goals

were derived for the whole group and contextual targets for our four water risk sites. As water, other than CO2, is a local topic which needs to be addressed locally, our four risk sites are the focus of our efforts. To fulfil the reduction target (15% until 2023) as well as the goal to become a water stewardship site (until 2023), strategic decisions must be made. Technical solutions and investment decisions are needed as well as cooperation's with local communities. The target achievement is assessed on regular basis to possibly adjust the strategy.

Regarding transition scenarios:
Based on the scenario analysis for transitional risks, we now have a much better understanding of how quickly we need to reduce emissions at which locations in order to ensure economic viability at the individual sites. Based on the regionally very different expected transition speeds, this results in individual reduction targets for each region. From this, concrete packages of measures can be derived.

C3.3

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Specialty chemicals company LANXESS has the ability to provide materials contributing to the mitigation of and adaptation to climate change. Furthermore, our technical capabilities allow us to be very carbon efficient. We aim to capitalise on these advantages and thereby to manage our climate related risks and opportunities. With respect to the business area Products & Services our strategy has three pillars: a) Reduction of the product carbon footprint of all our products. To achieve this, we are conducting our Climate-Neutral-2040-Strategy. Please refer to "Operations" below for details. b) We produce materials required for decarbonisation technologies, e.g. energy storage technologies. LANXESS' special thermoplastics can be made conductive and flame retardant. Thus, they are ideal material for use in batteries e.g. in electric and hybrid vehicles. In addition, LANXESS produces the basic components for the electrolyte. We expect that Li based batteries with this technology will penetrate the market fast and allow for zero emission mobility and more decentralized (solar/wind) energy

		production and storage. c) We produce materials suitable for technologies helping to adapt to climate change and to mitigate its consequences. 2) This has a long term TIME HORIZON: We have started to act according to this strategy over a decade ago and we aim for climate neutrality until 2040 for scope 1 and 2. 3)CASE STUDY SITUATION: The demand for products to implement water purification is increasing by ~4% p.a. The market for LANXESS specialty products like the Lewatit ion exchange resins, which are also used for microelectronics markets, is increasing even more. TASK: LANXESS is to expand its production capacities in order to serve the demand for water purification products. ACTION: LANXESS launched a project that analysed the markets in the individual regions in terms of supply demand development, growth potential and differentiation by product group. It also looked at various countries and sites where a new plant could be built. LANXESS announced in 2020, that it is currently planning to build a new production facility for ion exchange resins, for which it plans to invest between 80m€ and 120m€ in the coming years. RESULT: LANXESS is achieving an increasing revenue with water related sustainability solutions and is participating in the growing market segment.
Supply chain and/or value chain	Yes	1) Specialty chemicals company LANXESS has the ability to provide materials contributing to the mitigation of and adaptation to climate change. Furthermore, our technical capabilities allow us to be very carbon efficient. We aim to capitalise on these advantages and thereby to manage our climate related risks and opportunities. With respect to the business area Supply and Value Chain our strategy has three pillars: a) To reduce the product carbon footprint of our products we engage with our suppliers accordingly. For tracking the product carbon footprints we improve our scope 3 evaluation and establish product carbon footprint calculations. b) To be able to produce chemical products required for decarbonisation technologies, we cooperate closely with our customers, e.g. in the automotive and in the battery industry. The following case study shall illustrate this. c) To be able to produce chemical products suitable for

		technologies helping to adapt to climate change and to mitigate its consequences, the same approach applies: We cooperate closely with our customers, e.g. for water purification and treatment. This does not only lead to new applications of our products, but also requires to joint product development. 2) This has a long term TIME HORIZON: We have started to act according to this strategy over a decade ago and we aim for climate neutrality until 2040 for scope 1 and 2. 3)CASE STUDY: SITUATION: In the automotive sector the climate driven change to light vehicles has started years ago. TASK: LANXESS High Performance Materials businesses aim to work closely together with the automotive industry to develop lightweight solutions to reduce the CO2 emissions from cars. ACTION: Together with the major car manufactures we develop new lightweight solutions for selected components of the car. Especially those metal parts that can be substituted by light weight products. LANXESS has installed dedicated teams comprising R&D and application development specialists in every region. RESULT: LANXESS' lightweight polymer high-tech plastics and composites are applied in countless vehicle parts, from chassis parts to throttle pedal, and lead to lighter vehicles which require less energy input. The realisation of this opportunity is expected to add an additional sales volume for engineering plastics increasing sales by 30-90m€ per year.
Investment in R&D	Yes	1) Specialty chemicals company LANXESS has the ability to provide materials contributing to the mitigation of and adaptation to climate change. Furthermore, our technical capabilities allow us to be very carbon efficient. With respect to the business area R&D our strategy has three pillars: a) To reduce the product carbon footprint of our products we perform several processes of technology-related R&D projects like leveraging the Verbund-Structure of our Niederrhein locations to increase energy efficiency. b) To be able to produce chemical products required for decarbonisation technologies, we perform several joint R&D Projects with our customers, e.g. in the automotive and in the battery industry. This approach ensures, that we are

		able to adapt our products to their requirements. c) For chemical products required to adapt to climate change and to mitigate its consequences (e.g. water purification), the same approach is applied. 2) This has a long term TIME HORIZON: We have started to act according to this strategy over a decade ago and we aim for climate neutrality until 2040 for scope 1 and 2. 3) The following shall illustrate R&D related challenges: SITUATION: The necessary technologies to transform the chemical industry into a low carbon industry are not readily available. They require a high amount of R&D invest. For LANXESS, for instance the maleic acid production-technology is crucial. TASK: Several technological challenges are of general nature and very similar among the different players in the chemical industry. It is of advantage to collaborate in consortia in order to be faster and to dilute costs. ACTION: LANXESS exchanges ideas on which technologies to address to reduce CO2 emissions with technology experts from the chemical industry. Our innovation and technology experts identify the most promising collaboration partners. Therefore, the climate summit hosted by the World Economic Forum was founded in order to accelerate the development and upscale low carbon emitting technologies for chemical production. RESULT: A series of low carbon emitting technologies was identified. The outcome of the initiative is the consolidation of alliances for the collaborative implementation of the prioritized technologies. LANXESS started also two major cooperation programs regarding recycling technologies for plastics with additives.
Operations	Yes	1) Specialty chemicals company LANXESS has the ability to provide materials contributing to the mitigation of and adaptation to climate change. Furthermore, our technical capabilities allow us to be very carbon efficient. We aim to capitalise on these advantages and thereby to manage our climate related risks and opportunities. Our Climate Neutral 2040 strategy has been launched 2019, it focusses on improvements of our Operations: Despite increasing production volumes, emissions of greenhouse gases in the individual business units are set to decline. In addition to technological efficiency, changes to governance instruments play a role, with the impact on the

		company's carbon footprint becoming an investment criterion for organic growth and acquisitions. Lowering CO2e was introduced as an assessment criterion in the bonus system for senior management. Over the next few years, LANXESS will put into action special projects to significantly lower greenhouse gases. For example, the Group has currently built a facility for the decomposition of nitrous oxide at its Antwerp, Belgium, site. The new facility has begun operations in 2021 and reduce annual greenhouse gas emissions by around 150,000 metric tons of CO2e. After a second expansion in 2023, CO2e emissions will fall by another 300,000 metric tons. With these projects and other measures, LANXESS will decrease its CO2e emissions by a total of 800,000 metric tons by 2025, investing up to EUR 100 million in the process. 2) This has a long term TIME HORIZON: We have started to act according to this strategy over a decade ago and we aim for climate neutrality until 2040. 3)Case Study: SITUATION: Carbon emission of our Indian sites was in 2021 still 122 kt, of this 75 kt in scope 1 and 47 kt in scope 2 (market based). TASK: Reduction of these emissions ACTION: LANXESS is switching the entire energy supply at its Indian sites to renewable energy sources. There, the Group is massively expanding its supply of biomass and solar power and will no longer use coal or gas in the future. RESULT: This will cut CO2e emissions by a further 122kt metric tons from 2024.

C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures	1) Case study The following CASE STUDY shall illustrate the influence of climate-related risks and opportunities in case of CAPEX: SITUATION: In 2019 LANXESS has elaborated its Climate Neutral 2040 strategy, which has been launched in November 2019.

	Capital allocation Acquisitions and divestments Liabilities	TASK: The respective financial requirements for Capex until 2025 have to be estimated in order to be budgeted in our financial planning. ACTION: Projects which are to be realised until 2025 have been shortlisted. Over the next few years, LANXESS will put into action special projects to significantly lower greenhouse gases. For example, the Group is currently building a facility for the decomposition of nitrous oxide at its Antwerp, Belgium, site. The new facility has begun operations in 2021 and reduce annual greenhouse gas emissions by around 150,000 metric tons of CO2e. After a second expansion in 2023, CO2e emissions will fall by another 300,000 metric tons. In addition, LANXESS is switching the entire energy supply at its Indian sites to renewable energy sources. There, the Group is massively expanding its supply of biomass and solar power and will no longer use coal or gas in the future. The respective Capex-requirement as well as their expected timing have been estimated by our technical experts. RESULT: With these projects and other measures, LANXESS will decrease its CO2e emissions by a total of 800,000 metric tons by 2025, investing up to EUR 100 million in the process. This has been budgeted in our financial planning. 2) Time horizon Climate-related risks and opportunities have influenced our financial statements in several ways and since many years. As the related effects are not limited in time, they are of course also influencing our financial planning. Its time horizon is five years. Prominent examples are revenues and indirect costs: - Revenues are influenced due to the sales of chemical products required for decarbonisation technologies (e.g. lightweight materials for automotive and batteries), and of products being suitable for technologies helping to adapt to climate change and to mitigate its consequences, such as water purification. - Indirect costs are influenced by the need to buy certificates for compliance in the EU-ETS and by the costs for such certificates included in power prices.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

No, but we plan to in the next two years

C4. Targets and performance

C4.1

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

Absolute target
Intensity target

C4.1a

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

Target reference number

Abs 1

Year target was set

2019

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2018

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

1,490,000

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

1,687,000

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

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

3,177,000

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

100

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

100

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

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

100

Target year

2025

Targeted reduction from base year (%)

18.16

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

2,600,056.8

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

1,284,000

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

1,307,000

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

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

2,591,000

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

101.569790579

Target status in reporting year

Revised

Is this a science-based target?

No, but we are reporting another target that is science-based

Target ambition

Please explain target coverage and identify any exclusions

Our target setting approach: LANXESS has assessed its reduction targets based on the CDP criteria (published in the CDP's Technical Note on Science Based Targets). We concluded that the three targets together are sufficiently ambitious according to CDP. The targets apply to all of LANXESS' global business operations and cover 100% of GHG emissions (scope 1 and scope 2). The target has been adjusted to 2,600 kt CO2e in 2025 due to acquisitions of Emerald Kalama Chemicals & Theseo Group. However, the mid-term and long-term targets still seems to be reachable and don't have to be adjusted. The 2025 target seems to be overachieved, but with the acquisitions of Emerald Kalama Chemicals & Theseo Group accounted for full year 2021, our Scope 1 + 2 emissions would be ~2,740kt CO2e. 2. mid-term target is reduction to 1,600 kt CO2e in 2030 (50% reduction of emissions; 6% reduction yoy); 3. long-term target is to become climate neutral until 2040 (>90% reduction of emissions; 10% reduction yoy). In order to become climate-neutral, the last emissions (< 300,000 tons) will be reduced through compensation measures. We came to the conclusion that the targets fulfils the requirements of the SBT and CDP approach.

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

We plan to reach the target via our corporate projects reducing laughing gas in Antwerp und becoming climate neutral in India.

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

Target reference number

Abs 2

Year target was set

2019

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2018

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

1,490,000

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

1,687,000

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

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

3,177,000

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

100

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

100

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

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

100

Target year

2030

Targeted reduction from base year (%)

49.63

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

1,600,254.9

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

1,284,000

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

1,307,000

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

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

2,591,000

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

37.1651701978

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

Our target setting approach: LANXESS has assessed its reduction targets based on the CDP criteria (published in the CDP's Technical Note on Science Based Targets). We concluded that the three targets together are sufficiently ambitious according to CDP. The targets apply to all of LANXESS' global business operations and cover 100% of GHG emissions (scope 1 and scope 2). The target has been adjusted to 2,600 kt CO2e in 2025 due to acquisitions of Emerald Kalama Chemicals & Theseo Group. However, the mid-term and long-term targets still seems to be reachable and don't have to be adjusted. The 2025 target seems to be overachieved, but with the acquisitions of Emerald Kalama Chemicals & Theseo Group accounted for full year 2021, our Scope 1 + 2 emissions would be ~2,740kt CO2e. 2. mid-term target is reduction to 1,600 kt CO2e in 2030 (50% reduction of emissions; 6% reduction yoy); 3. long-term target is to become climate neutral until 2040 (>90% reduction of emissions; 10% reduction yoy). In order to become climate-neutral, the last emissions (< 300,000 tons) will be reduced through compensation measures. We came to the conclusion that the targets fulfils the requirements of the SBT and CDP approach.

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

We plan to reach the target via our corporate projects reducing laughing gas in Antwerp und becoming climate neutral in India.
Further we expect the transformation from coal to gas for our energy in the Niederrhein-sites and increase the share of green electricity worldwide.

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

---

Target reference number

Abs 3

Year target was set

2019

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2018

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

1,490,000

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

1,687,000

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

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

3,177,000

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

100

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

100

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

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

100

Target year

2040

Targeted reduction from base year (%)

90.6

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

298,638

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

1,284,000

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

1,307,000

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

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

2,591,000

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

20.3588012905

Target status in reporting year

Underway

Is this a science-based target?

No, but we are reporting another target that is science-based

Target ambition

Please explain target coverage and identify any exclusions

Our target setting approach: LANXESS has assessed its reduction targets based on the CDP criteria (published in the CDP's Technical Note on Science Based Targets). We concluded that the three targets together are sufficiently ambitious according to CDP. The targets apply to all of LANXESS' global business operations and cover 100% of GHG emissions (scope 1 and scope 2). The target has been adjusted to 2,600 kt CO2e in 2025 due to acquisitions of Emerald Kalama Chemicals & Theseo Group. However, the mid-term and long-term targets still seems to be reachable and don't have to be adjusted. The 2025 target seems to be overachieved, but with the acquisitions of Emerald Kalama Chemicals & Theseo Group accounted for full year 2021, our Scope 1 + 2 emissions would be ~2,740kt CO2e. 2. mid-term target is reduction to 1,600 kt CO2e in 2030 (50% reduction of emissions; 6% reduction yoy); 3. long-term target is to become climate neutral until 2040 (>90% reduction of emissions; 10% reduction yoy). In order to become climate-neutral, the last emissions (< 300,000 tons) will be reduced through compensation measures. We came to the conclusion that the targets fulfils the requirements of the SBT and CDP approach.

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

We plan to reach the target via our corporate projects reducing laughing gas in Antwerp und becoming climate neutral in India.

Further we expect the transformation from coal to gas for our energy in the Niederrhein-site and increase the share of green electricity worldwide.

Further we want to develop new processes with no or at least lower process emissions.

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

Target reference number

Abs 4

Year target was set

2022

Target coverage

Company-wide

Scope(s)

Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 1: Purchased goods and services
Category 2: Capital goods
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 4: Upstream transportation and distribution
Category 5: Waste generated in operations
Category 6: Business travel
Category 7: Employee commuting
Category 8: Upstream leased assets
Category 9: Downstream transportation and distribution
Category 13: Downstream leased assets
Category 14: Franchises
Category 15: Investments

Base year

2021

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

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

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

11,916,000

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

11,916,000

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

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

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

67

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

67

Target year

2030

Targeted reduction from base year (%)

11.1

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

10,593,324

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

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

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

11,916,000

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

11,916,000

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

0

Target status in reporting year

New

Is this a science-based target?

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

Target ambition

2°C aligned

Please explain target coverage and identify any exclusions

Our target setting approach: LANXESS has assessed its reduction targets based on the Science Based Targets criteria. In order to arrive at a suitable baseline, we have already considered the acquisitions of Emerald Kalama Chemicals & Theseo Group as a full-year effect. The Scope 3 baseline for all categories except 10-12 has increased from the 11,482,000 t CO2 reported in the annual report to 11,916,000 t CO2 in our baseline.

Reasons for exclusion of categories 10-12:
LANXESS as a chemical company produces intermediate products with many potential downstream application, each of which has a different GHG emissions profile, and so we are unable to reasonably estimate the downstream emissions associated with the various uses of the intermediate product. In most cases our customer is not the end user of the product and it gets chemically modified before end use. Therefore we exclude the downstream categories 10 and 11. (see recommendation Target-Validation Protocol V3.0 Chapter 4 Topic: Accounting for downstream emissions from intermediate products)

End of life emissions were estimated via country of final destination of LANXESS product, the respective disposal ways in that region, the carbon content of the product, the volume of the sold product and the durability of product in case of plastics disposed as landfill – nevertheless we consider this value (compared to the categories 1-9) as a more theoretical value because the use-phase of some of our products is longer than 30 years and end-of live is decades after production (and in 30 years the disposal ways will be different) and for some products the country of final destination of our product is in reality (due to the long value-chains) not the country of “end-of-live” (e.g. a plastic in a car which is sold after production into a different country).
Therefore we excluded this category with regard to the target. (see recommendation Target-Validation Protocol V3.0 Chapter 4 Topic: Accounting for downstream emissions from intermediate products)

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

Our scope 3 strategy will focus on the biggest categories. Purchased goods and services contributes 78% to our baseline, Waste generate in operations 7% and Upstream and Downstream transportation contributes further 6 %.
To reduce emissions of purchased goods and services and to help creating more transparency along the chemical value-chains we will engage with our supplier and our peers to
• drive standardization
• collect and exchange supplier/market based specific carbon footprints to increase transparency as well as to motivate suppliers to participate and to fight jointly climate change,
• increase the share of low carbon products in our raw-material basket and engage downstream and consequently offer more low carbon products to our customers to help developing downstream demand for zero/low/lower carbon products.
To reduce waste emissions we will
• start a “circular waste initiative” aiming to increase resource efficiency by 2.4 % every year and by this reducing our own emissions from waste disposal.

To reduce transport emissions we will
• work with selected logistic partners in joint projects to reduce transport emissions (areas of improvement will be increased asset utilization, optimize freight transport modes and improve fleet energy efficiency (including “green ocean vessels and green trucks).

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

C4.1b

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

Target reference number
Int 1

Year target was set
2016

Target coverage
Company-wide

Scope(s)
Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Intensity metric
Metric tons CO2e per metric ton of product

Base year
2015

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
0.253

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

0.253

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

100

Target year

2025

Targeted reduction from base year (%)

25

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

0.18975

% change anticipated in absolute Scope 1+2 emissions

-9

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

0.27

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

0.27

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

-26.8774703557

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

Our target setting approach: LANXESS has assessed its reduction targets based on the CDP criteria (published in the CDP's Technical Note on Science Based Targets). We concluded that the three targets together are sufficiently ambitious according to CDP. The targets apply to all of LANXESS' global business operations and cover 100% of GHG emissions (scope 1 and scope 2). After overachievement of existing targets, LANXESS set three new targets based on 2018 with ~3,200kt CO2e. The absolute short term target has been adjusted due to Emerald Kalama Chemicals and Theseo acquisition: The new Target is reduction of 3,200 kt CO2e in 2018 to 2,600 kt CO2e in 2025. Based on this absolute reduction target we derived our relative intensity targets in 2019. However the intensity targets don't have to be adjusted. We came to the conclusion that the targets fulfil the requirements of the SBT and CDP approach. In line with the absolute targets the Scope 1 emissions intensity will also be reduced to 0.19 until 2025.

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

We plan to reach the target via our corporate projects reducing laughing gas in Antwerp und becoming climate neutral in India.

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

Target reference number

Int 2

Year target was set

2019

Target coverage

Company-wide

Scope(s)

Scope 2

Scope 2 accounting method

Scope 3 category(ies)

Intensity metric

Metric tons CO2e per metric ton of product

Base year

2015

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

0.461

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

0.461

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

100

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

100

Target year

2025

Targeted reduction from base year (%)

48

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

0.23972

% change anticipated in absolute Scope 1+2 emissions

-40

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)

0.27

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

0.27

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

86.3159797542

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

Our target setting approach: LANXESS has assessed its reduction targets based on the CDP criteria (published in the CDP's Technical Note on Science Based Targets). We concluded that the three targets together are sufficiently ambitious according to CDP. The targets apply to all of LANXESS' global business operations and cover 100% of GHG emissions (scope 1 and scope 2). After overachievement of existing targets, LANXESS set three new targets based on 2018 with ~3,200kt CO2e. The absolute short term target has been adjusted due to Emerald Kalama Chemicals and Theseo acquisition: The new Target is reduction of 3,200 kt CO2e in 2018 to 2,600 kt CO2e in 2025. Based on this absolute reduction target we derived our relative intensity targets in 2019. However the intensity targets don't have to be adjusted. We came to the conclusion that the targets fulfil the requirements of the SBT and CDP approach. In line with the absolute targets the Scope 2 emissions intensity will also be reduced to 0.24 until 2025.

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

We plan to reach the target via our corporate projects reducing laughing gas in Antwerp und becoming climate neutral in India.

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

C4.2

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

Net-zero target(s)
Other climate-related target(s)

C4.2b

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

Target reference number

Oth 1

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

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

Energy consumption or efficiency
MWh

Target denominator (intensity targets only)

metric ton of product

Base year

2015

Figure or percentage in base year

2.06

Target year

2025

Figure or percentage in target year

1.239

Figure or percentage in reporting year

1.64

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

51.1571254568

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, this energy efficiency target is part of the LANXESS CO2 reduction target: "LANXESS will become climate neutral by 2040"

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

This LANXESS energy management target covers all LANXESS locations and also contributes to our CO2 reduction target.

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

LANXESS is working intensively to improve the energy efficiency of its production processes from year to year.

List the actions which contributed most to achieving this target

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs3

Target year for achieving net zero

2040

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions

We want to be climate neutral for Scope 1 and 2 emissions until 2040. This is in line with the SBTi requirements. Since there is no path for the Chemical Sector, there seems to be limited value add for SBTi approval.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Yes

Planned milestones and/or near-term investments for neutralization at target year

In order to become climate-neutral, the last emissions (< 300,000 tons) will be reduced through compensation measures. Since there is still a way to go until 2040 and permanent carbon removal measures are heavily under discussion right now, we are still looking for the best alternatives for LANXESS.

Planned actions to mitigate emissions beyond your value chain (optional)

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	4	
To be implemented*	20	1,015
Implementation commenced*	23	3,700
Implemented*	48	172,043
Not to be implemented	3	

C4.3b

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

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

12,446

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

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

1,229,000

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

2,225,000

Payback period

4-10 years

Estimated lifetime of the initiative

21-30 years

Comment

Process automation, Reduction of steam consumption by modifying the plant or plant components (e.g. distillation columns) or pre heating water with residual steam. (16 Projects)

Initiative category & Initiative type

Energy efficiency in production processes
Fuel switch

Estimated annual CO2e savings (metric tonnes CO2e)

3,037

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

Scope 1

Voluntary/Mandatory

Voluntary

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

0

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

0

Payback period

No payback

Estimated lifetime of the initiative

16-20 years

Comment

Reducing sub bituminous coal usage by replacing it with biomass (1 Project)

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

432

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

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

73,650

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

736,000

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

Reduction of electricity consumption by modifying the plant or plant components (e.g. pumps or ventilation) or optimization of processes. (12 Projects)

Initiative category & Initiative type

Low-carbon energy consumption
Low-carbon electricity mix

Estimated annual CO2e savings (metric tonnes CO2e)

4,882

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

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

0

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

0

Payback period

No payback

Estimated lifetime of the initiative

6-10 years

Comment

Green Electricity by contract or solar electricity from own production (2 Projects)

Initiative category & Initiative type

Non-energy industrial process emissions reductions

Other, please specify

Reduction of the greenhouse gas nitrous oxide (laughing gas)

Estimated annual CO2e savings (metric tonnes CO2e)

150,000

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

Scope 1

Voluntary/Mandatory

Voluntary

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

0

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

10,000,000

Payback period

No payback

Estimated lifetime of the initiative

16-20 years

Comment

Reduction of the greenhouse gas nitrous oxide (laughing gas) (1 Project)

Initiative category & Initiative type

Energy efficiency in buildings

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

63

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

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

Voluntary/Mandatory

Voluntary

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

21,000

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

141,000

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

Switch from conventional lighting to LED (6 Projects)

Initiative category & Initiative type

Other, please specify
Other, please specify
Building insulation, Water saving, Reducing process emissions

Estimated annual CO2e savings (metric tonnes CO2e)

1,183

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

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

Voluntary/Mandatory

Voluntary

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

172,000

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

76,000

Payback period

1-3 years

Estimated lifetime of the initiative

21-30 years

Comment

Building insulation, Water saving, Reducing process emissions (10 Projects)

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Operating in compliance with legal standards is the prerequisite of our business activity. Additional internal standards help to raise our level of ambition and steer our active climate oriented portfolio management.
Dedicated budget for low-carbon product R&D	In order to steer low carbon investment decisions R&D is required because relevant low carbon technologies are to be developed. LANXESS provides such dedicated budget. 100m€ capital investments should be invested until 2025, what requires significant R&D efforts to support the goal to become climate neutral until 2040 and reach the 2025 milestone (2600 kt CO2e).
Partnering with governments on technology development	Climate protection and climate mitigation require new alliances and partnerships across industries and towards governments. LANXESS is striving to be part of the solution and is therefore collaborating in several relevant initiatives. The initiatives drive investments into the technologies of the future.

C4.5

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

Yes

C4.5a

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

Level of aggregation

Group of products or services

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

Other, please specify

Scopeblue Products. The brand label identifies products that either consist of at least 50 percent circular (recycled or biobased) raw materials, or whose carbon footprint is at least 50 percent lower than that of conventional products.

Type of product(s) or service(s)

Chemicals and plastics

Other, please specify

Durethan® Scopeblue is a composite that contains glass fibre. 92 percent of the raw materials in Durethan® Scopeblue have been replaced by sustainable alternatives – this applies to the polyamide 6 content as well as the glass fibre.

Description of product(s) or service(s)

The engineering plastic Durethan® (chemical name: polyamide 6 and polyamide 66) is popular in vehicle construction for several reasons:

It is robust and heat-resistant.
It tolerates contact with various materials.
It is easy to process.

Durethan® comes in different grades and compositions. Durethan® Scopeblue is a composite that contains glass fibre. These fibres make it particularly strong and resilient.

92 percent of the raw materials in Durethan® Scopeblue have been replaced by sustainable alternatives – this applies to the polyamide 6 content as well as the glass fibre. This is best-in-class for glass fibre-reinforced plastics.

Representing an environmentally friendly innovation, the raw materials that go into Durethan® Scopeblue are organic or recycled. The upside: the final product and its properties remain unchanged.

End-application for this high performance plastic are in the automotive industry in the production of car front ends, brake pedals and oil pans.

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

Yes

Methodology used to calculate avoided emissions

Other, please specify

ISO 14067 Product Carbon Footprint

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

Cradle-to-gate

Functional unit used

1 kg of unpacked product

Reference product/service or baseline scenario used

1 kg of unpacked Product – Fossil based Raw Materials

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

Cradle-to-gate

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

Explain your calculation of avoided emissions, including any assumptions

The reduction in the Product Carbon Footprint can be attributed to the uptake of biogenic CO2 by the plant, which serves as the raw material for our product.

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

C5. Emissions methodology

C5.1

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

No

C5.1a

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

Row 1

Has there been a structural change?

Yes, an acquisition

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

Theseo group, Emerald Kalama Chemical

Details of structural change(s), including completion dates

April 1, 2021, completed acquisition of the French Theseo group, (3 production sites), August 3, 2021, completed acquisition of Emerald Kalama Chemical, (3 production sites)

C5.1b

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

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	As a result of the acquisitions of the Theseo Group (as of April 1, 2021) and Emerald Kalama Chemicals (as of August 3, 2021) new production sites were included in the environmental figures pro rata.

C5.1c

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

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because we do not have the data yet and plan to recalculate next year	We have included full-year figures for our major acquisitions EKC and Theseo.

C5.2

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

Scope 1

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

1,490,000

Comment

Scope 2 (location-based)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

2,081,000

Comment

Scope 2 (market-based)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

1,687,000

Comment

Scope 3 category 1: Purchased goods and services

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

12,552,000

Comment

Scope 3 category 2: Capital goods

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

419,000

Comment

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

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

269,000

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1, 2018

Base year end
December 31, 2018

Base year emissions (metric tons CO2e)
780,000

Comment

Scope 3 category 5: Waste generated in operations

Base year start
January 1, 2018

Base year end
December 31, 2018

Base year emissions (metric tons CO2e)
713,000

Comment

Scope 3 category 6: Business travel

Base year start
January 1, 2018

Base year end
December 31, 2018

Base year emissions (metric tons CO2e)
12,000

Comment

Scope 3 category 7: Employee commuting

Base year start
January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

22,000

Comment

Scope 3 category 8: Upstream leased assets

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

31,000

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

486,000

Comment

Scope 3 category 10: Processing of sold products

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

LANXESS produces exclusively intermediate products, which are processed further by our customers to other intermediate or final products. The various types of processing are not tracked by LANXESS. Therefore, it is not possible for us, to calculate the GHG emissions from the processing of sold products in a decent manner that is reliable,

complete, accurate and consistent with annual data. This approach is consistent with the contents of the WBCSD Chemical Sector Standard "Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain".

Scope 3 category 11: Use of sold products

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

LANXESS produces exclusively intermediate products, which are processed further by our customers to other intermediate or final products. The various types of processing are not tracked by LANXESS. Also the conditions of use of the end products based on LANXESS intermediate products are not known which does not allow for calculating the emissions belonging to that category.

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

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

7,578,000

Comment

Scope 3 category 13: Downstream leased assets

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Not relevant since the estimated GHG emissions belonging to that category are below 0.001 % of total CO2e Scope 3 emissions.

Scope 3 category 14: Franchises

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Not relevant for LANXESS. We do not own or operate franchises.

Scope 3 category 15: Investments

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

LANXESS holds a share of 40 % in joint venture Currenta. Currenta provides Lanxess energy. The emissions from energy production are included in our Scope 2 reporting. The percentage of total CO2e Scope 3 emissions from the remaining joint venture is insignificant (below 0,1 %)

Scope 3: Other (upstream)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Not relevant

Scope 3: Other (downstream)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Not relevant

C5.3

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

1,284,000

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

LANXESS decided to calculate and report CO2 Scope 2 for both methods. In order to be able to influence our scope 2 emissions as far as possible, we are focusing our activities on the "market-based" method.

C6.3

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

Reporting year

Scope 2, location-based

1,562,000

Scope 2, market-based (if applicable)

1,307,000

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

Storage-only and office facilities

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

Storage-only facilities and office buildings are normally leased assets outside of our production plants. The emissions calculated for these assets are integrated in our Scope 3 reporting. Storage facilities and office buildings within production sites are integrated in our Scope 1+2 emission reporting. The emissions from LANXESS owned storage facilities or office buildings outside the reporting boundary are estimated to be less than 1% of Scope 1+2 emissions.

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

1

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

Figures has been derived by analysis of internal experts. It was assumed that the share of LANXESS-owned warehouse and office space is less than 10% of the total warehouse and office space used by LANXESS. By far the greater part is leased. The CO2 emissions from the leased space are included in the scope 3 emissions and amount to less than 3% of the scope 1 & 2 emissions. If we assume that the company's own warehouse and office space only accounts for around 10% of the leased space, then this only accounts for around 0.3% of the emissions.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

8,986,500

Emissions calculation methodology

Average data method

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

0

Please explain

a) Activity data: Amounts of purchased goods & services procured in the reporting year were determined based on the LANXESS ERP System (SAP BW). Utilities, such as oxygen, nitrogen, compressed air, and water, were determined from the invoices and included in the calculation of emissions for the purchased goods and services category.
b) Emission factors: The cradle-to-gate emission factors for calculating the emissions of purchased goods and services were obtained primarily from LCA/PCF data bases such as e.g. “GaBi”. Emission factors used are certified in accordance to industrial standards.
c) Methodology, calculation and assumptions: The upstream GHG emissions from purchased goods and services were calculated by multiplying the purchased quantity of each product/utility by the corresponding cradle-to-gate emission factor. To specify the emission factor to be used, the chemical substance, the country of origin, and the underlying process of production were taken into consideration. In case of unavailability of a matching emission factor, the respective positions have been approximated or extrapolated by taking an emission factor (or a mix of emission factors) into account based on similarities regarding chemical composition and/or production processes. A premium of 2% was added because a larger number of emission factors relating to countries with a below-average CO2e energy mix were used for the extrapolation for

raw materials originating from countries with an above-average CO2e energy mix. Possible inaccuracies due to varying concentration of purchased goods were prevented by adding specifications from the LXS “EHS material data system”.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

550,000

Emissions calculation methodology

Average spend-based method

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

0

Please explain

a) Activity data: Based on the LANXESS business data management system, qualitative and monetary amounts of purchased capital goods were determined. b) Emission factors: The factors of major purchased capital goods (80% of total spend) were determined based on the DEFRA Tables Annex 13 (2012) (constant exchange rates and adjusted for inflation). c) Methodology, calculation and assumptions: For calculating the GHG emissions, monetary amounts-taken from the business data management system-were multiplied with the respective emission factors. The coverage ratio amounts 80% of total spend. Subsequently, the resultant amount of CO2e Scope 3 was extrapolated to 100 %.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

410,900

Emissions calculation methodology

Average data method

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

0

Please explain

a) Activity data: Amounts of purchased energy sources (fuels) used in the reporting period were determined based on the LANXESS "HSE Performance data system". b) Emission factors: The Cradle-to-Gate and WTT (Well-to-tank) emission factors were

determined based on the corresponding DEFRA Tables. T&D (Transmission and Distribution) emission factors were taken from IEA list (T&D loss adjustment). c) Methodology, calculation and assumptions: The GHG emissions for extraction, production and transportation of fuels for our own energy production were calculated by multiplying the purchased quantity of fuel with the corresponding cradle-to-gate emission factors. For electricity purchased from an external supplier, the CO2e emissions for extraction, refining and transport of primary fuels before their use in power generation were calculated by multiplying the respective amounts with the identified factors per country. Similarly, the CO2e emissions of grid losses and the WTT (well-to-tank) emissions of grid losses were calculated by multiplying the specific power rate for each country with the respective factor. Emissions from steam were calculated by multiplying the purchased quantity of steam with the corresponding WTT - heat and steam emission factors. Also the grid losses for steam were calculated by multiplying the purchased quantity of steam with the corresponding WTT- district heat & steam distribution factor. As cooling energy is mostly generated by using electricity, we transferred the purchased amounts of cooling energy into electricity and calculated the CO2e emissions analogue to purchased electricity.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

278,000

Emissions calculation methodology

Distance-based method

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

0

Please explain

a) Activity data: Quantities, types of goods procured and regional split of purchase in the reporting year were obtained from LANXESS' internal business data management systems. For assessing LANXESS' internal transports additional information such as origin and destination points, mode of transport and load factors was retrieved from the business data systems.
b) Emission factors: The average emission factors for transport by truck, rail and ship were determined based on the CEFIC Report: "GLEC Module 5 - CEFIC Guideline".
c) Methodology, calculation and assumptions: To calculate the GHG emissions the amounts of delivered goods were summarized in the most important country to country routes, weighted by ton of raw material. The top 30 country to country routes accounts for 96% of the transported raw materials. For these top 30 country to county routes we looked at the top city to city routes, to cover at least 80% for each county to country route. For these city to city routes we estimated the average km for rail, ship and truck. The amounts determined for each transport mode were multiplied with the emission factors in tonnes/km to get to an average for each country to country route. Finally, the

resulting scope 3 emissions were extrapolated to 100% of the total purchasing volume by taking the other country to county routes into account. Since raw material supply by plane is of no importance for LANXESS, this is not included in the calculation.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

682,500

Emissions calculation methodology

Waste-type-specific method

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

0

Please explain

a) Activity data: The amount of waste and waste water-generated during production processes-were determined based on the LANXESS "HSE Performance data system". A distinction was made according to the disposal routes incineration (without energy recovery) and disposal.
b) Emission factors: i)Waste: The emission factors for combustion and other disposal are assumed to be 3.67 kg CO2 eq./kg C. The assumption is based on the conservative conversion of 1 kg C into CO2, resulting in 3.67 kg CO2. The emission factor for the waste to be treated in the landfill is assumed to be 20.62 kg CO2 eq./kg C. It is assumed that 50% of the carbon is converted to CO2 and 50% to CH4, based on the carbon content. No emissions are assumed for the recycling of waste. There is no credit for energies generated from incineration with energy recovery.
c) Methodology, calculation and assumptions: i) Waste: The carbon content is estimated at 80 % for hazardous waste. It is assumed that hazardous waste has a higher carbon content due to its composition. For non-hazardous waste, 50 % carbon content is assumed. The composition of this waste is lower in carbon. For landfilling, a carbon content of 10 % is assumed. This value was assumed based on the maximum limit value for organic carbon of the waste in the landfill specified in German and international legislation. The relevant amounts that do not contain carbon (e.g. death rock from mining activities or inorganic waste) were removed from the considered volume of waste. Recycled waste was also not integrated in our calculation. To calculate the GHG emissions the amount of disposed waste per disposal route was multiplied with the carbon content and the respective emission factor. ii) Waste Water: For the amount of CO2 of the TOC, the TOC content before clarification is subtracted with the one after clarification. The TOC content after clarification corresponds to the TOC from the HSE key figures. The emission factor for the residual TOC is estimated at 3.67 kg CO2 eq./kg C: Then the amount of CO2 from the operation of the wastewater treatment plant is added to the amount of CO2 from the TOC. The amount of CO2 from wastewater

treatment is calculated using an emission factor from an LCA database (GaBi Professional).

Business travel

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

3,100

Emissions calculation methodology

Distance-based method

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

0

Please explain

a) Activity data: The number of hotel stays was determined by division "Global Procurement & Logistics". According to these, the global number of kilometers for short-, medium- and long-haul flights and travelled kilometers by rail have been determined as an extrapolation of the hotel stays. The percentage increase in hotel stays was transferred to the travel kilometers. b) Emission factors: The emission factors for air and rail travel were obtained from the DEFRA Tables of the previous reporting year. The emission factor for hotel stays was determined to be the average value over all countries (UK conversion table). c) Methodology, calculation and assumptions: In order to calculate the GHG emissions for air and rail travel the actual travelled distances were multiplied with the respective emission factors for short-, medium- and long-haul in the previous reporting year. For the current reporting year an extrapolation according to the increase in hotel stays was used for the calculation. The GHG emissions for hotel stays were calculated by multiplying the number of all nights with the corresponding emission factor for 100% of the hotel stays.

Employee commuting

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

19,440

Emissions calculation methodology

Distance-based method

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

0

Please explain

a) Activity data: Number of employees in the reporting year. b) Emission factors: The emission factors for individual modes of transport were taken from the DERFA Table "Business travel - land". c) Methodology, calculation and assumptions: It was assumed that 50 % of employees travelled by car, 12.5 % by rail, 12.5 % by bus or tram to work. 25 % of our employees live in the immediate vicinity of our sites and come by foot or by bicycle to work. The average distances from home to work were adopted with 30km for car / train and 20km for bus / tram. The average number of working days per employee and per year was assumed as 220 days. To calculate the GHG emissions the average distance to work was multiplied with the number of trips and the emission factor per mode of transport.

Upstream leased assets

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

30,200

Emissions calculation methodology

Supplier-specific method
Average data method

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

0

Please explain

a) Activity data: Leased cars: The LANXESS Fleet Management determined the number of leased vehicles and the vehicle kilometers as defined in the leasing contracts. Leased office and storage space: This space was determined by the LANXESS department "Corporate Real Estate & Facility Management". Leased equipment: The magnitude of CO2e emissions through leased equipment has been evaluated as not relevant. b) Emission factors: Leased cars: The emission factors for leased vehicles in Germany were provided by the vehicle manufacturers themselves. For all other vehicles, emission factors were determined based on the DEFRA Table for "unknown medium passenger cars". Leased office and storage space: The standard factors for energy use per square meter office and warehouse space as well as the emission factors per kWh were determined based on Annex A of the "Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain". c) Methodology, calculation and assumptions: The GHG emissions of the leased vehicles were calculated based on the emission factors and the vehicle kilometers which were defined in the leasing contracts. The GHG emissions of leased office space were calculated based on average energy and emission factors differentiated according to Europe and “Rest of World”.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

521,800

Emissions calculation methodology

Distance-based method

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

0

Please explain

a) Activity data: Leased storage space: This space was determined by the LANXESS department "Global Category Management Logistics Services". Transport information, like number of shipment, weight of freight as well as source and destination information were taken from the LANXESS Transport & Logistics Information System.
b) Emission factors: Leased storage space: The standard factors for energy use per square meter office and warehouse space as well as the emission factors per kWh were determined based on Annex A of the " Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain". Emission factors to calculate the GHG emissions for each mode of transportation of sold products were determined based on DEFRA 2020 Tables.
c) Methodology, calculation and assumptions: The GHG emissions of leased storage space were calculated based on average energy and emission factors differentiated according to Europe and “Rest of World”. GHG emissions from the transportation of sold products to our customers were calculated from an external service provider. In a first step this provider calculated the shipping distance for each transport process based on the LANXESS transport information. This was made for all used transport modes separately. The calculated shipping distance was multiplied by the shipping weight and led to the Payload-distance (tonne-kilometre). In a last step, the Payload-distance for each transport mode was multiplied by the corresponding average emission factor and added to the final CO2 emission value.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Reason of exclusion: LANXESS produces exclusively intermediate products, which are processed further by our customers to other intermediate or final products. The various types of processing are not tracked by LANXESS. Therefore, it is not possible for us, to calculate the GHG emissions from the processing of sold products in a decent manner that is reliable, complete, accurate and consistent with annual data. This approach is in line with the WBCSD Chemical Sector Standard "Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain" 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".

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Reason for exclusion: LANXESS produces exclusively intermediate products, which are processed further by our customers to other intermediate or final products. The various types of processing are not tracked by LANXESS. Also the conditions of use of the end products based on LANXESS intermediate products are not known which does not allow for calculating the emissions belonging to that category. This approach is in line with the WBCSD Chemical Sector Standard "Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain" which states that “Chemical companies should not include indirect use phase emissions in the inventory, unless the end use of chemical products is known”.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

5,394,000

Emissions calculation methodology

Waste-type-specific method

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

0

Please explain

a) Activity data: For the reporting year the third party “Sales Volume in million €” and respective “Sold Volume in tons” based on each material as well as the “Country of Final Destination” were extracted from the LANXESS ERP System (SAP BW). The “End Markets” were derived via “Branchenanalyse” (sector analysis). The “Sales of durable polymers” were derived via NACE classification. All products classified as “20.16. plastics in primary form” were considered as durable plastics. The “Carbon Content Per Product” was taken from the LXS “EHS material data system”. The “Disposal Routes Per Region” were derived via public OECD data. Packaging data was not included in this calculation because of limited data availability.

b) Emission factors:

The emission factor for recycled materials was assumed to be zero. The emission factor for incineration without energy recovery was calculated based on the assumption that 100% of carbon content was converted into CO2. The emission factor for incineration with energy recovery was calculated based on the assumption that 25% of carbon

content was converted into CO2. The remaining CO2 was allocated to energy production. The emission factor for landfill disposal was calculated based on the assumption that 50% of carbon content was converted into CO2 and the remaining 50% was converted into methane.
c) Methodology, calculation and assumptions: The emissions were calculated as described in the following steps. 1. Where possible all sales volume were converted into metric tons 2. The carbon content of all products was determined 3. Products that are completely consumed in the use phase were excluded (in accordance with “End Markets” see section Activity Data) 4. The region is determined based on the sold product’s country of final destination. 5. A durable polymer flag was assigned to relevant products based on NACE classification. All products classified as “20.16. plastics in primary form” were considered as durable plastics. This is a relevant information because landfilled durable polymer will not degrade into CO2. 6. The emission factor was allocated based on the determined region (see 4), the durable polymer flag (see 5) and based on the region’s disposal method breakdown (%). 7. The emission factor... [For full explanation see attached verification statement in chapter "C10.1c Verification"]

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Not relevant since the estimated GHG emissions belonging to that category are below 0.001 % of total CO2e Scope 3 emissions.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Not relevant for LANXESS. We do not own or operate franchises.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

Up to end of April 2020 LANXESS holds a share of 40 % in joint venture Currenta. Currenta provides Lanxess with energy. The emissions from energy production are included in our Scope 2 reporting. The percentage of total CO2e Scope 3 emissions from the remaining joint ventures is insignificant below 0,1 %.

Other (upstream)

Evaluation status

Please explain

Other (downstream)

Evaluation status

Please explain

C6.7

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

Yes

C6.7a

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

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	294,000	

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

0.0003429

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

2,591,000

Metric denominator

unit total revenue

Metric denominator: Unit total

7,557,000,000

Scope 2 figure used

Market-based

% change from previous year

17.4

Direction of change

Decreased

Reason for change

Total revenues increased by 23.8%, while combined Scope 1 and Scope 2 emissions increased only by approximately 2.3% compared to 2020. The increase in emissions is mainly due to acquisitions in 2021.
But the overproportional increase of sales and our implemented projects to reduce CO2 emissions (-172,000 t; see question 4.3a) overcompensates the effects from acquisitions.

Intensity figure

0.545

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

2,591,000

Metric denominator

Other, please specify

Volume sold (in metric tonnes)

Metric denominator: Unit total

4,754,000

Scope 2 figure used

Market-based

% change from previous year

8.4

Direction of change

Decreased

Reason for change

Total amount of volume sold increased by 11.8%, while combined Scope 1 and Scope 2 emissions increased only by approximately 2.3% compared to 2020. The increase in emissions is mainly due to acquisitions in 2021.
But the overproportional increase of sold volumes and our implemented projects to reduce CO2 emissions (-172,000 t; see question 4.3a) overcompensates the effects from acquisitions.

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CH4	9,870	IPCC Sixth Assessment Report (AR6 - 100 year)
N2O	306,065	IPCC Sixth Assessment Report (AR6 - 100 year)
HFCs	200	IPCC Sixth Assessment Report (AR6 - 100 year)
CO2	967,865	IPCC Sixth Assessment Report (AR6 - 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Argentina	1,165
Australia	0
Belgium	474,800
Brazil	5,900
Canada	14,265
China	6,475
France	405
Germany	287,455
India	75,090
Italy	0
Japan	0
Mexico	310
Netherlands	32,770

Russian Federation	0
Singapore	15
Taiwan, China	5
United Kingdom of Great Britain and Northern Ireland	15,605
United States of America	365,610
South Africa	4,130

C7.3

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

By business division

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Advanced Intermediates	358,600
Engineering Materials	468,980
Specialty Additives	201,205
Consumer Protection	251,085
Reconciliation	4,130

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

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

	Gross Scope 1 emissions, metric tons CO2e	Comment
Chemicals production activities	1,284,000	

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Argentina	530	830
Australia	120	155
Belgium	80,830	33,350

Brazil	1,295	750
Canada	5,770	2,645
China	110,925	96,830
France	290	130
Germany	1,024,640	895,640
India	69,145	47,080
Italy	18,135	17,950
Japan	380	355
Mexico	6,860	2,340
Russian Federation	165	165
Singapore	180	195
Netherlands	34,070	18,150
Taiwan, China	3,655	2,600
United Kingdom of Great Britain and Northern Ireland	5,960	4,465
United States of America	192,765	177,085
South Africa	6,285	6,285

C7.6

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

By business division

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Advanced Intermediates	829,305	729,840
Engineering Materials	143,090	108,030
Specialty Additives	316,875	253,285
Consumer Protection	266,445	209,560
Reconciliation	6,285	6,285

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

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

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Chemicals production activities	1,562,000	1,307,000	

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 tCO2e from purchased feedstock	Explain calculation methodology
Ammonia		LANXESS sources from a broad basis of chemical feedstocks. Looking at LANXESS's Scope 3, Category 1 emissions these are the three biggest shares of purchased feedstock. As this is sensitive information with view to our competitors, we cannot provide this figure.
Aromatics extraction		LANXESS sources from a broad basis of chemical feedstocks. Looking at LANXESS's Scope 3, Category 1 emissions these are the three biggest shares of purchased feedstock. As this is sensitive information with view to our competitors, we cannot provide this figure.
Specialty chemicals		LANXESS sources from a broad basis of chemical feedstocks. Looking at LANXESS's Scope 3, Category 1 emissions these are the three biggest shares of purchased feedstock. As this is sensitive information with view to our competitors, we cannot provide this figure.

C-CH7.8a

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

	Sales, metric tons	Comment
Carbon dioxide (CO2)	0	
Methane (CH4)	0	
Nitrous oxide (N2O)	0	

Hydrofluorocarbons (HFC)	0	
Perfluorocarbons (PFC)	0	
Sulphur hexafluoride (SF6)	0	
Nitrogen trifluoride (NF3)	0	

C7.9

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

Increased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	36,600	Decreased	1.45	In 2021 the use of biomass increased which means that the amount of fossil fuels and therefor the Scope1 emissions decreased. Compared to the total Scope 1 and Scope 2 emissions issued in the previous year (2,532,200 t) the emissions decrease by about 1.45%. [Calculation: (-36,600 / 2,532,200) x 100 = -1.45%].
Other emissions reduction activities	172,000	Decreased	6.79	In 2021 LANXESS reduced its Scope 1 and Scope 2 emissions by about 172,000 metric tons (t) of CO2e from implementing 48 emission reduction activities. Compared to the total Scope 1 and Scope 2 emissions issued in the previous year (2,532,200 t) we reduced the emissions by about 6.79%. [Calculation: (-172,000/ 2,532,200) x 100 = -6.79%].
Divestment	0	No change	0	No change within the reporting year
Acquisitions	104,200	Increased	4.11	In 2021 LANXESS acquired Emerald Kalama Chemical & Theseo group. Scope 1 and Scope 2 emissions increased in the reporting year by

				104,200 tons (t) or 4.11%. [Calculation: (104,200/ 2,532,200) x 100 = 4.11%].
Mergers	0	No change	0	No change within the reporting year
Change in output	235,800	Increased	9.31	The increased volume of products sold in the reporting year, led also to higher Scope 1 and Scope 2 emissions. Calculated on increased volume of products sold and assumed that no emission reduction activities would have been realized, the CO2e emission would have increased by 235,800 metric tons (t) or 9.31% [Calculation: (235,800/ 2,532,200) x 100 = 9.31%]
Change in methodology	38,600	Decreased	1.52	In 2021, LANXESS has adjusted the Global Warming Potential (GWP) factors to the current status. The GWP factors of the IPCC AR6 were now used for the reporting year. Updating the factors results in a reduction of CO2e emissions by 1.52%. [Calculation: (38,600,000/ 2,532,200) x 100 = -1.52%]
Change in boundary	0	No change	0	No change within the reporting year
Change in physical operating conditions	0	No change	0	No change within the reporting year
Unidentified	0	No change	0	No change within the reporting year
Other	0	No change	0	No change within the reporting year

C7.9b

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

Market-based

C8. Energy

C8.1

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

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

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	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 (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	915,900	3,112,550	4,028,450
Consumption of purchased or acquired electricity		138,130	1,617,785	1,755,915
Consumption of purchased or acquired heat		0	5,740	5,740

Consumption of purchased or acquired steam		0	1,974,730	1,974,730
Consumption of purchased or acquired cooling		0	150,770	150,770
Consumption of self-generated non-fuel renewable energy		265		265
Total energy consumption		1,054,295	6,861,575	7,915,870

C-CH8.2a

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

Consumption of fuel (excluding feedstocks)

Heating value

LHV (lower heating value)

MWh consumed from renewable sources inside chemical sector boundary

915,900

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

3,112,550

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

4,028,450

Consumption of purchased or acquired electricity

MWh consumed from renewable sources inside chemical sector boundary

138,130

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

1,617,785

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

1,755,915

Consumption of purchased or acquired heat

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

5,740

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

5,740

Consumption of purchased or acquired steam

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

1,974,730

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

1,974,730

Consumption of purchased or acquired cooling

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

150,770

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

150,770

Consumption of self-generated non-fuel renewable energy

MWh consumed from renewable sources inside chemical sector boundary

265

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

0

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

265

Total energy consumption

MWh consumed from renewable sources inside chemical sector boundary

1,054,295

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

6,861,575

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

7,915,870

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	No

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

C8.2c

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

Sustainable biomass

Heating value

LHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

Comment

Other biomass

Heating value

LHV

Total fuel MWh consumed by the organization

915,750

MWh fuel consumed for self-generation of electricity

457,875

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

457,875

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

150

MWh fuel consumed for self-generation of electricity

75

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

75

Comment

Coal

Heating value

LHV

Total fuel MWh consumed by the organization

129,790

MWh fuel consumed for self-generation of electricity

64,895

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

64,895

Comment

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

19,450

MWh fuel consumed for self-generation of electricity

9,725

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

9,725

Comment

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

2,944,540

MWh fuel consumed for self-generation of electricity

1,472,270

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

1,472,270

Comment

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

Heating value

LHV

Total fuel MWh consumed by the organization

18,770

MWh fuel consumed for self-generation of electricity

9,385

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

9,385

Comment

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

4,028,450

MWh fuel consumed for self-generation of electricity

2,014,225

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

2,014,225

Comment

C8.2d

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	2,014,225	2,014,225	457,875	457,875
Heat	0	0	0	0
Steam	2,014,225	2,014,225	457,875	457,875
Cooling	0	0	0	0

C-CH8.2d

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

Electricity

Total gross generation inside chemicals sector boundary (MWh)

2,014,225

Generation that is consumed inside chemicals sector boundary (MWh)

2,014,225

Generation from renewable sources inside chemical sector boundary (MWh)

457,875

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Heat

Total gross generation inside chemicals sector boundary (MWh)

0

Generation that is consumed inside chemicals sector boundary (MWh)

0

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Steam

Total gross generation inside chemicals sector boundary (MWh)

2,014,225

Generation that is consumed inside chemicals sector boundary (MWh)

2,014,225

Generation from renewable sources inside chemical sector boundary (MWh)

457,875

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Cooling

Total gross generation inside chemicals sector boundary (MWh)

0

Generation that is consumed inside chemicals sector boundary (MWh)

0

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

C8.2e

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

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

57% Wind, 25% Sustainable Biomass, 14% Solar, 4% Hydropower

Country/area of low-carbon energy consumption

United Kingdom of Great Britain and Northern Ireland

Tracking instrument used

Contract

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

16,400

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

United Kingdom of Great Britain and Northern Ireland

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

Comment

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Wind, Solar, Hydropower

Country/area of low-carbon energy consumption
United Kingdom of Great Britain and Northern Ireland

Tracking instrument used
REGO

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
8,000

Country/area of origin (generation) of the low-carbon energy or energy attribute
United Kingdom of Great Britain and Northern Ireland

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

Comment

C8.2g

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

Country/area
Argentina

Consumption of electricity (MWh)
1,850

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

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

1,850

Country/area
Australia

Consumption of electricity (MWh)
175

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

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

175

Country/area

Belgium

Consumption of electricity (MWh)

360,230

Consumption of heat, steam, and cooling (MWh)

133,315

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

493,545

Country/area

Brazil

Consumption of electricity (MWh)

12,610

Consumption of heat, steam, and cooling (MWh)

0

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

12,610

Country/area

Canada

Consumption of electricity (MWh)

31,240

Consumption of heat, steam, and cooling (MWh)

13,165

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

44,405

Country/area

China

Consumption of electricity (MWh)

67,180

Consumption of heat, steam, and cooling (MWh)

123,480

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

190,660

Country/area

France

Consumption of electricity (MWh)

4,855

Consumption of heat, steam, and cooling (MWh)

0

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

4,855

Country/area

Germany

Consumption of electricity (MWh)

698,370

Consumption of heat, steam, and cooling (MWh)

2,403,870

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

3,102,240

Country/area

India

Consumption of electricity (MWh)

37,635

Consumption of heat, steam, and cooling (MWh)

0

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

37,635

Country/area

Italy

Consumption of electricity (MWh)

15,770

Consumption of heat, steam, and cooling (MWh)

58,150

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

73,920

Country/area

Japan

Consumption of electricity (MWh)

790

Consumption of heat, steam, and cooling (MWh)

0

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

790

Country/area

Mexico

Consumption of electricity (MWh)

3,275

Consumption of heat, steam, and cooling (MWh)

14,000

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

17,275

Country/area

Netherlands

Consumption of electricity (MWh)

31,355

Consumption of heat, steam, and cooling (MWh)

71,875

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

103,230

Country/area

Russian Federation

Consumption of electricity (MWh)

530

Consumption of heat, steam, and cooling (MWh)

0

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

530

Country/area

Singapore

Consumption of electricity (MWh)

470

Consumption of heat, steam, and cooling (MWh)

0

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

470

Country/area

South Africa

Consumption of electricity (MWh)

6,745

Consumption of heat, steam, and cooling (MWh)

0

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

6,745

Country/area

Taiwan, China

Consumption of electricity (MWh)

1,635

Consumption of heat, steam, and cooling (MWh)

5,145

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

6,780

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of electricity (MWh)

28,055

Consumption of heat, steam, and cooling (MWh)

0

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

28,055

Country/area

United States of America

Consumption of electricity (MWh)

453,410

Consumption of heat, steam, and cooling (MWh)

0

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

453,410

C-CH8.3

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

Yes

C-CH8.3a

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

Fuels used as feedstocks

Natural gas

Total consumption

Total consumption unit

metric tons

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

0.7

Heating value of feedstock, MWh per consumption unit

Heating value

LHV

Comment

As our feedstock is considered as confidential business information, we calculated the emission factor from the average carbon content of our total feedstock. Please also remember that a large proportion of our carbon feedstock is not converted to CO2, but is raw material for higher-value products. Due to the differentiated raw material portfolio and the different types of use, we do not believe that it makes sense to calculate a correct heating value from the given information.

Fuels used as feedstocks

Butane

Total consumption

Total consumption unit

metric tons

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

12.58

Heating value of feedstock, MWh per consumption unit

Heating value

Unable to confirm heating value

Comment

As our feedstock is considered as confidential business information, we calculated the emission factor from the average carbon content of our total feedstock. Please also remember that a large proportion of our carbon feedstock is not converted to CO2, but is raw material for higher-value products. Due to the differentiated raw material portfolio and the different types of use, we do not believe that it makes sense to calculate a correct heating value from the given information.

C-CH8.3b

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

	Percentage of total chemical feedstock (%)
Oil	29
Natural Gas	24
Coal	1
Biomass	1
Waste (non-biomass)	2
Fossil fuel (where coal, gas, oil cannot be distinguished)	0
Unknown source or unable to disaggregate	43

C9. Additional metrics

C9.1

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

C-CH9.3a

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

Output product

Polymers

Production (metric tons)

Capacity (metric tons)

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

Electricity intensity (MWh per metric ton of product)

Steam intensity (MWh per metric ton of product)

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

Comment

This information is confidential.

Output product

Specialty chemicals

Production (metric tons)

Capacity (metric tons)

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

Electricity intensity (MWh per metric ton of product)

Steam intensity (MWh per metric ton of product)

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

Comment

Output product

Caprolactam

Production (metric tons)

Capacity (metric tons)

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

Electricity intensity (MWh per metric ton of product)

Steam intensity (MWh per metric ton of product)

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

Comment

This information is confidential.

Output product

Adipic acid

Production (metric tons)

Capacity (metric tons)

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

Electricity intensity (MWh per metric ton of product)

Steam intensity (MWh per metric ton of product)

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

Comment

This information is confidential.

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

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

	Investment in low-carbon R&D	Comment
Row 1	Yes	As a company in the energy-intensive specialty chemicals industry, LANXESS of course sees the need to invest in low-carbon R&D in order to further optimise its own processes.

C-CH9.6a

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

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Radical process redesign	Large scale commercial deployment	≤20%		LANXESS has taken another major step on the road to climate neutrality: the specialty chemicals company inaugurated a nitrous oxide reduction plant at its site in Antwerp in 2021. The plant breaks down around 500 metric tons of nitrous oxide per year, which is equivalent to the climate impact of 150,000 metric tons of CO2. LANXESS has invested around EUR 10 million in its construction. A second plant is scheduled to start up in 2023 and is expected to eliminate a further 300,000 tons of CO2 equivalents (CO2e). Nitrous oxide (N2O), also known as laughing gas, is generated at the Antwerp site during the production of the plastic intermediate caprolactam. It is harmless to

				humans but 300 times more harmful to the environment than carbon dioxide. At temperatures of around 1,000 degrees Celsius, LANXESS breaks down the nitrous oxide into its harmless components nitrogen and oxygen in the new plant, thus neutralizing it completely. In a second process step, the plant breaks down further nitrogen oxides (NOx). Ammonia is used as a reducing agent for this. At temperatures between 250 and 450 degrees Celsius, the nitrogen oxides are broken down and produce nitrogen and water. Thanks to the innovative combination of these processes the plant is highly thermally efficient. This is ensured by specially developed ceramic heat exchangers. These capture and store the heat used in the thermal oxidation process and generated during the breakdown of nitrous oxide and nitrogen oxides. When the heat exchangers have stored the heat from the clean gas, the process flow changes direction and the heat exchangers now preheat the incoming exhaust gas. This change of direction then takes place recurrently. This means that significantly less external energy has to be supplied to keep the process running.
Process step integration	Large scale commercial deployment	≤20%		The introduction of a system for online monitoring of steam traps and timely repair of steam traps leads to a significant reduction in steam losses. (saving of more than 4000 t CO2e per year)

Waste heat recovery	Large scale commercial deployment	≤20%		CO2 reduction via steam input reduction for plant in Leverkusen. Vapours from the stripper are fed directly into the low-boiling column. The use of vapours replaces the previous use of steam (CO2e reduction of approximately 1200t/year).

C10. Verification

C10.1

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

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

C10.1a

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

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

2021 AR LXS_web.pdf

Page/ section reference

Page 30 and Pages 252-253

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

2021 AR LXS_web.pdf

Page/ section reference
Page 30 and Pages 252-253

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

2021 AR LXS_web.pdf

Page/ section reference
Page 30 and Pages 252-253

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1c

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

Scope 3 category
Scope 3: Purchased goods and services

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

CDP_DJSI_Prüfvermerk_Lanxess_full EN.pdf

Page/section reference
Pages 3-13

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance

Limited assurance

Attach the statement

CDP_DJSI_Prüfvermerk_Lanxess_full EN.pdf

Page/section reference

Pages 3-13

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.2

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

Yes

C10.2a

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C9. Additional metrics	Other, please specify Volume sold	ISAE3000	LANXESS also uses a number of other data to evaluate environmental performance. These numbers also have an impact on the environment sustainability. (see Page 30 and Pages 252-253) 1
C9. Additional metrics	Other, please specify Energy consumption	ISAE3000	LANXESS also uses a number of other data to evaluate environmental performance. These numbers also have an impact on the environment sustainability. (see Page 30 and Pages 252-253) 1
C9. Additional metrics	Other, please specify Water	ISAE3000	LANXESS also uses a number of other data to evaluate environmental performance. These numbers also have an impact on the

			environment sustainability. (see Page 30 and Pages 252-253) [1]
C9. Additional metrics	Other, please specify Wastewater	ISAE3000	LANXESS also uses a number of other data to evaluate environmental performance. These numbers also have an impact on the environment sustainability. (see Page 30 and Pages 252-253) [1]
C9. Additional metrics	Other, please specify Waste	ISAE3000	LANXESS also uses a number of other data to evaluate environmental performance. These numbers also have an impact on the environment sustainability. (see Page 30 and Pages 252-253) [1]
C9. Additional metrics	Other, please specify Air emissions (other than CO2)	ISAE3000	LANXESS also uses a number of other data to evaluate environmental performance. These numbers also have an impact on the environment sustainability. (see Page 30 and Pages 252-253) [1]

[1] 2021 AR LXS_web.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.

Canada federal fuel charge

EU ETS

Netherlands carbon tax

Other carbon tax, please specify

UK “buy-out fee” to the Environment agency in the UK which is in effect a carbon tax

C11.1b

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

EU ETS

% of Scope 1 emissions covered by the ETS

38

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2021

Period end date

December 31, 2022

Allowances allocated

747,469

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

492,454

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

C11.1c

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

Canada federal fuel charge

Period start date

January 1, 2021

Period end date

December 31, 2021

% of total Scope 1 emissions covered by tax

1

Total cost of tax paid

463,000

Comment

Elmira is in the process of applying to the OBPS program which should reduce these costs going forward. Emissions in Canada are also embedded in our group wide energy and environment management system. Our strategy is to reduce our emissions gradually and project wise according to our low carbon transition plan.

Netherlands carbon tax

Period start date

January 1, 2021

Period end date

December 31, 2021

% of total Scope 1 emissions covered by tax

3

Total cost of tax paid

47,956

Comment

Unfortunately the EUA-price for 2021 has been set at 26,73 € and the Dutch CO2 tax has been set at 30,48 €, which means that in that year an ETS installation will therefore have to pay 3.75 euros in tax for the industrial emissions of every tonne of CO2, less the number of dispensations rights.

Other carbon tax, please specify

Period start date

January 1, 2021

Period end date

December 31, 2021

% of total Scope 1 emissions covered by tax

1

Total cost of tax paid

36,000

Comment

UK “buy-out fee” to the Environment agency in the UK which is in effect a carbon tax. Emissions in the UK are embedded in our group wide energy and environment management system. Our strategy is to reduce our emissions gradually and project wise according to our low carbon transition plan.

C11.1d

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

EU ETS

With regard to the EU emissions trading, some of LANXESS' chemical plants are under the regime of the fourth EU-ETS trading period (2021-2030). The aim is to comply with all the compliance requirements and to be one of the most efficient players in every area. We are aiming for a at least balanced situation with respect to allowances. Our allowance management system is geared towards satisfying the compliance requirements. EU ETS installations are embedded in our group wide energy and environment management system. Our strategy is to reduce our emissions gradually and project wise according to our low carbon transition plan. This will help us to address shortages in the EU ETS.
Since the decline in allocated of free certificates has already defined for the current trading period until 2030, our strategy for the years until 2030 is to try to implement sufficient energy efficiency / decarbonisation projects in order to avoid having to buy additional certificates.

Canada federal fuel charge

Elmira is in the process of applying to the OBPS program which should reduce these costs going forward. Emissions in Canada are also embedded in our group wide energy and environment management system. Our strategy is to pay the federal fuel charge every year on time, reduce our emissions gradually and project wise according to our low carbon transition plan.

UK “buy-out fee” to the Environment agency in the UK which is in effect a carbon tax.

Emissions in the UK are embedded in our group wide energy and environment management system. Our strategy is to pay the "Buy-out fee" charge every year on time, to reduce our emissions gradually and project wise according to our low carbon transition plan.

Netherlands carbon levy system which sets in effect a carbon price floor

As long as Emerald Kalama in Botlek as an EU-ETS installation is lacking free allowances and the Dutch carbon levy is also higher than the EUA-price, the site will be confronted with additional carbon costs. Emissions in the Netherlands are also embedded in our group wide energy and environment management system. Our strategy is to pay the tax charge every year on time, reduce our emissions gradually and project wise according to our low carbon transition plan.

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?

Yes

C11.3a

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

Objective for implementing an internal carbon price

Change internal behavior
Drive energy efficiency
Drive low-carbon investment

GHG Scope

Scope 1
Scope 2

Application

This GHG shadow price is applied to all Business Units and all facilities once a year in its Business Strategy Review since 2017. With the help of a shadow price of 135 €/ton CO2e emitted the sustainability of all LANXESS production sites is assessed. This applies to Scope 1 and Scope 2 emissions.
First the Gross Value Add (GVA) per Business unit is calculated. In a second step all the environmental KPIs (including CO2) are monetized with shadow prices to calculate the Gross Values Add After Impact (GVAAI). Target of this analysis to identify the less sustainable businesses. Businesses with a limited financial profitability but high environmental costs can be seen as less sustainable. So this analysis aims to catch the long-term effects. Therefore a relative high CO2 price compared to actual prices is taken into account to reflect the long-term perspective.

Actual price(s) used (Currency /metric ton)

135

Variance of price(s) used

None.

Type of internal carbon price

Shadow price

Impact & implication

This analysis is done on site level for every Business Unit since 2017. Target of this analysis is comparing the financial profitability, the GVA, with the profitability including the environmental impact, the GVAAI. So this analysis allows to identify the businesses and sites, where the positive economic impact does not exceed the negative environmental impact.
The application of a shadow price in our business strategy review helps us to increase awareness and understanding for climate and energy related topics throughout our whole executive and management team and refrain from bad investment that counteract our ambition to move towards a low carbon performance. It helps to point out which sites and installations as well as product are emission intensive. For the most critical

sites regarding carbon performance detailed roadmaps have been evaluated to limit this problem over time, by reducing GHG emissions significantly. This analysis also supports scenarios with globally increasing prices over time. The outcome of the last business strategy review was that certain reduction opportunities were identified, e.g. for our two sites in India. It provided food for thought on the relevance to reduce emissions at one of our major sites. In the aftermath colleagues from the technical, the strategy and the regulatory department caught up to discuss new ideas to move forward at this site. In summary an internal carbon price is a successful vehicle to increase awareness and to assess the long term sustainability of products and sites. So we are able to come to an integrated understanding of our sites, make transparent GHG impacts in relations to our sites and foster information exchange on low-carbon opportunities with our Business Units.

Objective for implementing an internal carbon price

Drive energy efficiency
Drive low-carbon investment
Stress test investments

GHG Scope

Scope 1
Scope 2

Application

Investment projects (capital expenditure, acquisitions, Energy efficiency measures, carbon reduction projects)

Actual price(s) used (Currency /metric ton)

100

Variance of price(s) used

Differentiated, evolutionary pricing driven by the specific assessment, e.g. geography and timeframe of an investment.

Type of internal carbon price

Shadow price

Impact & implication

Carbon pricing is considered in internal assessments of major capital investment projects and M&A projects. LANXESS has set up a structured process to evaluate investment projects (e.g. capital expenditures, acquisitions as well as CO2 reduction an energy efficiency measures). The process considers a project base case as well as the option to assess alternative scenarios. Carbon pricing can be attributed to any case depending on strategic goals as well as the expected likelihood and magnitude of impact. In this way, it directly affects the evaluation of economic viability of the capital expenditure business case. Carbon pricing containing scope 1 and 2 emissions. The price of carbon considered depends on various factors driven by the specific assessment, e.g. geography and timeframe of an investment. For example an

investment in South America might face lower pressure regarding increasing regulatory for CO2-isseus than the same plant in the EU. Therefore a lower CO2 price at least for the first years seems to be appropriate. Sometimes, several pricing scenarios are used to evaluate uncertainties in future regulatory environments.

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers/clients

C12.1a

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

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change

% of suppliers by number

20

% total procurement spend (direct and indirect)

67

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

59

Rationale for the coverage of your engagement

Background:
As founding member of the Together for Sustainability (TfS) initiative for the Chemical Industry, we value this initiative as core in our engagement for supplier-related sustainability. On behalf of its members, TfS requests suppliers to report and to participate in either a TfS Audit, and or TfS Assessment. Both yield a score, which is used in LANXESS´s supplier management processes (see below).

Selection process and rational:
LANXESS´s selection of suppliers for reporting follows two aims: (a) avoiding supplier related risks, (b) encouragement for sustainability. Thus, this request for reporting is also a cornerstone of our supplier engagement strategy. We focus this engagement in order to make it as efficient and effective as possible.

A number of key factors are considered for the identification of suppliers to participate in this initiative.
Although the procurement spend is the most important factor (very high supplier coverage in terms of spend), we look at various other factors that have a significant impact on the supplier relationship: contract duration, strategic importance, business impact, previous CSR ratings, category and country risks.
Within the Procurement organization, we follow a systematic sustainability risk analysis and strategy approach for new and ongoing business, which plays a key role in the supplier selection for participation in the TfS assessments and/or audits.

This process, known as XCORE, for contract values > €5 mio, and SCORE for contract values between €1m - €5m, has defined Sustainability targeted measures to improve our suppliers' sustainability and thereby gradually lower the LANXESS sustainability risk score. On this basis LXS requests a constantly increasing number of its suppliers to participate in a TfS Audit, and or TfS Assessment, and a constantly increasing number is actually adhering to this.

How suppliers are incentivized to report:
TfS generates supplier scorecards, which are reported to LANXESS on monthly basis. These Scorecard form an integral part of the strategy that the Strategic Buyers presents in his XCORE / SCORE presentation to management, for approval.
Preference is given by LANXESS to a supplier with a favorable score, thereby incentivizing the participation, reporting of the required information and improvement.

Impact of engagement, including measures of success

Details on the type of information requested from suppliers:
As outlined above, Together for Sustainability (TfS) is the foundation for our Sustainability engagement with suppliers. TfS Assessments & Audits focus on environmental topics.
This verifies if a suppliers has a water-related environmental policy in place and if they take actions on water management (awareness training, reduction of water intake, water recycling, measures to minimize water quality impacts). Suppliers must report on specific environmental KPIs.

How the information is used within the company:
As outlined above, the TfS generates supplier scorecards based on the information received from the suppliers and on the outcomes of the assessments and audits. These Scorecard form an integral part of the strategy that the Strategic Buyers presents in his XCORE / SCORE presentation to management, for approval.
Preference is given by LANXESS to a supplier with a favorable score, thereby incentivizing the participation, reporting of the required information and improvement.
On behalf of its members (e.g. LANXESS), the TfS generates a Corrective Action Plan (CAP) on the basis of the Assessments & Audits.
This CAP is used in discussions with the supplier to ensure continuous improvement.

Further details:
With regard to the migration of a database-supported risk analysis system into our SAP

system, we successfully completed the test phase in the reporting year. The global roll-out is now taking place in parallel with a general update of the SAP system. The risk analysis system allows us to retrieve supplier-related data from around 600,000 sources and in various qualitative dimensions – such as regulatory, environmental, social or financial – in real time.

How success is measured:
Jointly, suppliers´ reporting and respective assessment/audits by TfS forms a revolving process. Realization of measures suggested in the Corrective Action Plan (CAP) improves the scoring. Thus, we measure success by (a) the improvement of the scoring results of our suppliers over time, (b) the percentage of our suppliers requesting to report actually adhering to this request.
In the year 2021, 1,258 new supplier Assessments were initiated by TfS members via EcoVadis, and 3,429 re-assessments were conducted as well as a further 597 existing assessments shared with TfS.

Comment

C12.1b

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

Type of engagement & Details of engagement

Education/information sharing
Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number

100

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

100

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

Sustainability and, in particular, climate-related information and performance are included in almost all standard business communications. We learned, that information campaigns regarding climate need different information dependent on the receiver and the special topics that need to be understood. Therefore we informed our customers regarding climate issues on three levels to ensure to reach 100% of our customer.

1) Corporate Level: In addition to standard communication about our performance and strategy in our Annual Report, we published our Climate-Neutral-2040-Strategy on a separate website in 2019. Here all details can be found regarding reduction targets for 2025, 2030 and 2040 and the corporate projects were described to reach the first part of

our climate neutral journey. In 2021 we published a climate factsheet, where we explained our climate strategy, climate performance, our climate risk assessment and management, our ambitions regarding scope 3 emissions, etc. Here our customers can find answers to all questions they have about LANXESS on a corporate Level.

2) Customer Level: In addition, customer engagement also includes responding to specific customer information requests, as for example through the CDP Supply Chain Program. Here we answered for years all requests we received as detailed as possible.

3) Product Level: The demand for life cycle analysis, like Life Cycle Assessment, Environmental Product Declaration and Product Carbon Footprints has increased steadily over the past few years. Of course, we follow up on these requests and try to provide the data as quickly as possible. However, the creation of a qualitative life cycle analysis requires a lot of effort as well as process specific data and is therefore very time consuming, so that we cannot always provide this data immediately. We are constantly developing our concepts and approaches so that we will continuously increase the proportion of products for which we carry out a life cycle analysis. The Assessment and Product ISO certification in form of Life Cycle Assessment (ISO 14044), Product Carbon Footprints (ISO 14067) and Environmental Product Declaration (ISO 14025) of 10 product groups is planned for this year. The number of calculated Product Carbon Footprints (ISO 14067) is significantly higher.

Impact of engagement, including measures of success

1) How success is measured:
The primary measure of success is retaining our customers, increasing our share of sales and, in some cases, encouraging our customers to strive for more ambitious emission reduction targets. We measure the impact of our information campaigns with our bi-annual Customer Satisfaction Analysis. This analysis comprises beside the usual aspects as product quality & pricing, delivery & supply and customer service also sustainability evaluation questions to measure the impact of our information campaigns and satisfaction of our customers with our own climate performance.
To ensure a representative result, the first step was to sort the customers worldwide by business unit in descending order of turnover. From this list, so many customers were selected that they covered at least 80% of the turnover per business unit. The list was then sent to the Business Units, where all strategically relevant customers were also selected, especially those with a focus on climate and sustainability topics.
The threshold for our measure of success is to be at least 3 percent points better than our competitors in climate topics.

2) Impact of engagement: Our most recent Customer Satisfaction Analysis lead to following result: Almost all of our customers (>90-95%) regard sustainability topics (e.g. sustainable products or climate action and energy efficiency) as important for their business (100% of business units covered by the survey through use of representative samples). Differentiated by the different sustainability topics, in average about 75% (68% - 85%) of our customer respondents rated our sustainability activities very good or good (top 2 on a scale of 6). Additionally, we were rated ~5 points (on a scale 0 – 100) better than our competitors for every sustainability topic. Since we are rated worldwide 5

percent points better as our competitors for climate topics, we bet the threshold. So this campaign can be seen as a success. Since the climate issue can only be seen and solved globally and we are a globally active company, we have deliberately set our goal globally. And since all our business units have a significant carbon footprint, as is usual in the chemical industry, we have deliberately not excluded any business units.

C12.2

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

Yes, climate-related requirements are included in our supplier contracts

C12.2a

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

Climate-related requirement

Setting a science-based emissions reduction target

Description of this climate related requirement

We started to integrate the commitment to join the SBTi on large contracts with our premium partners, where setting an SBT is an essential part of the new contract.

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

5

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

5

Mechanisms for monitoring compliance with this climate-related requirement

Supplier scorecard or rating

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

Retain and engage

C12.3

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

Row 1

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

Yes, we engage directly with policy makers
Yes, we engage indirectly through trade associations
Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

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

Yes

Attach commitment or position statement(s)

LANXESS goal is to be climate neutral by 2040 for scope 1 and 2.

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

LANXESS implemented a process to discuss, evaluate and assess its political activities on energy supply, energy efficiency and climate change with respect to LANXESS overall climate change strategy in a steering committee, the Climate and Energy Sub-Committee. This committee includes members from all internally relevant stakeholder groups, such as the
- corporate development group,
- the purchasing department,
- the investor relations group,
- the corporate communications group
- as well as the largest and most energy intensive business units.

In the case that new developments are identified as important for LANXESS and require strategic or operational response, they are communicated to the Climate and Energy Sub-Committee who drive the response activities. It is led by a board member and is part of the LANXESS Sustainability Committee.

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate

Circular economy

Specify the policy, law, or regulation on which your organization is engaging with policy makers

LANXESS has taken part in a broad stakeholder dialogues and think tanks about the perspectives of the industry and especially the chemical industry with respect to the

actual term decarbonization which is used to describe the path away from products and processes with high impact on the emission of greenhouse gases.

Policy, law, or regulation geographic coverage

Global

Country/region the policy, law, or regulation applies to

Your organization's position on the policy, law, or regulation

Support with major exceptions

Description of engagement with policy makers

LANXESS has taken part in a broad stakeholder dialogues and think tanks about the perspectives of the industry and especially the chemical industry with respect to the actual term decarbonization which is used to describe the path away from products and processes with high impact on the emission of greenhouse gases.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

LANXESS has taken part in a broad stakeholder dialogues and think tanks about the perspectives of the industry and especially the chemical industry with respect to the actual term decarbonization which is used to describe the path away from products and processes with high impact on the emission of greenhouse gases. Decarbonization for the chemical industry needs to be translated into "climate neutral" economy in combination with an increasing "de-fossilization" of its feedstock. In this sense an approach is needed which allows various circular pathways along the chain of economic value and also takes into account the positive climate relevant effects of chemicals products in service life.

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

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Emissions trading schemes

Specify the policy, law, or regulation on which your organization is engaging with policy makers

LANXESS is an active member of the " Working Group Emission Trading " ("Arbeitsgruppe Emissionshandel") of the German Ministry for the Environment (BMUB). The group is meant as a stakeholder dialogue of the ministry with the industry.
LANXESS is also an active member of the VCI (Chemical industry association) committee on climate protection and emissions trading and is closely involved in future legislative projects. By this as well as by active memberships in a number of other national and European associations we take the opportunity to let policy makers benefit

from our knowledge and to discuss the impact of the Emission Trading Regulations on affected companies. Our aim is to maximize the emission reduction effect of the scheme and to minimize its impact on international competition. Since LANXESS is very energy intensive in terms of heat demand we have continued our focus on the importance of a proper allocation of certificates for heat supply in industry. This has been presented e. g. at the regional ministry of economy in North Rhine-Westphalia.

Policy, law, or regulation geographic coverage

Regional

Country/region the policy, law, or regulation applies to

EU28

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

Build-up an Emission Trading Scheme (ETS) with maximal impact on emission reduction and limited impact on international competition.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

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

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Low-carbon, non-renewable energy generation

Specify the policy, law, or regulation on which your organization is engaging with policy makers

LANXESS is actively accompanying the update of the European and national energy efficiency legislation. The focus of the update is on the efficiency target setting and measures to achieve the targets in the period from 2021 until 2030.
Combined Heat and Power generation (CHP) especially via combined application of gas and steam turbines have the highest degree of efficiency in fuel based energy generation with values up to 96% with respect to fuel input. LANXESS still considers to keep the CHP as beneficial concept for steam and power supply. Yet the latest updates of the CHP support regulation in Germany as well as the Renewable Energy Act has significantly reduced the options for common projects with external energy suppliers.

Policy, law, or regulation geographic coverage

Regional

Country/region the policy, law, or regulation applies to

EU28

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

Allow for joint CHP projects by accepting financial support for industrial CHP as well. Overcome conflicts with exemption rules for renewable fees for self-generated electric power.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

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

Yes, we have evaluated, and it is aligned

C12.3b

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

Trade association

German Chemical Industry Association (VCI)

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

Consistent

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

We are attempting to influence them to change their position

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

VCI is committed to international standards for sustainability and works closely with global organizations for the promotion of sustainable development, climate protection and resource efficiency. Furthermore, the VCI maximizes the impact of the German chemical industry on climate protection, promotes exchange of ideas and concepts and tries to avoid competitive disadvantage of international markets.

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

Describe the aim of your organization's funding

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

Yes, we have evaluated, and it is aligned

Trade association

European Chemical Industry Council (CEFIC)

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

Consistent

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

We are attempting to influence them to change their position

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

CEFIC engages with policy makers from the EU on the key role of the chemical industry in providing solutions to mitigate GHG emissions and adapt to climate change. CEFIC advocates for the a business environment in which the chemical industry can realize this potential best. Furthermore, CEFIC functions are to provide a basis for further direct engagement activities.

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

Describe the aim of your organization's funding

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

Yes, we have evaluated, and it is aligned

Trade association

Federation of German Industries (BDI)

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

Consistent

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

We publicly promote their current position

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

BDI is "the voice of German industry". BDI engages with German policy makers on the key role of the industry in providing solutions to a broad spectrum of issues, e.g. mitigate GHG emissions and adapt to climate change. BDI advocates for the a business environment in which the industry can realize this potential best.

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

Describe the aim of your organization's funding

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

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

VIK (Industrial Energy Producers and Consumers Association)

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

Consistent

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

We publicly promote their current position

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

LANXESS is an energy intensive enterprise. VIK monitors the impact of the German energy-intensive industry on climate protection, drives the exchange of ideas and concepts to minimize the impact, and engages on political level to avoid competitive disadvantage of its members in international markets.

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

Describe the aim of your organization's funding

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

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

PlasticsEurope

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

Consistent

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

We are attempting to influence them to change their position

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

LANXESS produces large volumes of engineering plastics. Especially in automotive application they are often applied in lightweight construction to reduce fuel consumption. Moreover LANXESS provides a number of additives which lead to an optimized performance and extended lifecycles of the plastic materials in their applications. PlasticsEurope aims for the plastics industry to be a responsible partner to policy-makers and other stakeholders. Plastics Europe encourages the manufacture of plastics using the most efficient, resource saving processes which include minimizing the environmental impact. This association identifies specific actions the industry can take in the areas of energy efficiency, resource efficiency, consumer protection and climate protection. Plastics can help tackle climate change through the efficient use of resources. For example, if half of all buildings were insulated to the highest standards that plastics can deliver, the EU could reduce CO2 emissions in buildings by 35%, or 340 million tons. This would exceed the Kyoto targets for EU 27 for the sector, and would be close to half of the more stringent EU target for the year 2020. PlasticsEurope is an official Associate of the Sustainable Energy EU Campaign, as part of the plastics industry's efforts to contribute to an increasingly energy efficient society.

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

Describe the aim of your organization's funding

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

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

IN4Climate.NRW

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

Consistent

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

We are attempting to influence them to change their position

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

IN4climate.NRW is a platform for knowledge sharing, dialogue and collaboration, which was launched by the North Rhine-Westphalian state government. Here, experts from industry, science and politics work together to develop innovative strategies and solutions for climate neutral industrial processes and products. Civic groups are also involved in the discussions.

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

Describe the aim of your organization's funding

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

Yes, we have evaluated, and it is aligned

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization

University or other educational institution

State the organization to which you provided funding

LANXESS is actively involved in several information and opinion shaping activities via associations or other political stakeholders. Members of the LANXESS board as well the environmental policy experts from LANXESS have addressed issues of future climate change and sustainable energy policy in their regular meetings with such political stakeholders (e.g. members of the parliament and minister of economy) on EU-, national and regional level.

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

350,000

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

Among other things, LANXESS is pursuing the goal of creating transparency and sensitivity for energy-intensive chemical production as a starting point for almost all value chains in industry in general and for the company's own climate neutrality efforts in particular.

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

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

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

2021 AR LXS_web.pdf

Page/Section reference

Governance is addressed on page 14,
Strategy is addressed on pages 33, 34,
Risk & Opportunities are addressed on pages 32, 58, 147,
Emission Figures are addressed on pages 34, 35,
Emission Targets are addressed on page 18.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

Annual Report 2021

C15. Biodiversity

C15.1

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

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, both board-level oversight and executive management-level responsibility	In order to more consistently pursue our sustainability targets, we established a new committee structure at the beginning of 2021. The top decision-making body is now the Sustainability Committee, which manages all key issues relating to sustainability. Its members include all members of the Board of Management. Five subcommittees report to the Sustainability Committee, which deal with various focal points of our sustainability strategy and are each headed by a Board of Management member: - “Climate & Energy” sub-committee – implementation of the LANXESS “Climate neutral 2040” strategy - “Health, Safety & Environment” sub-committee – development of sustainable and safe production sites - “Value Chain Circularity & Product Stewardship” subcommittee – promotion of sustainable products and value chains - “People & Governance” sub-committee – coordination of issues of LANXESS’s corporate and social responsibility - “Stakeholder expectations and reporting standards” sub-committee – fulfilment of external reporting standards and stakeholder management Regarding biodiversity topics the subcommittee - “Value Chain Circularity & Product Stewardship” focusses on supply chain issues, - “Climate & Energy” focusses on emission management., and - “Health, Safety & Environment” focusses on sustainable production at our sites, Water management & Waste management

C15.2

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

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity
Row 1	No, but we plan to do so within the next 2 years

C15.3

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

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Other, please specify Waste Management, Use of renewable Resources, Emissions management

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located

C16. Signoff

C-FI

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

C16.1

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

	Job title	Corresponding job category
Row 1	Chief Operating Officer (COO) / Member of the Board of Management	Chief Operating Officer (COO)