Welcome to your CDP Climate Change Questionnaire 2023

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 8.1 billion in 2022. The company currently has about 13,100 employees in 33 countries. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives and consumer protection products. 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 products and 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 the value chain. *** LANXESS is serious about climate protection - both in terms of its own carbon footprint and with regard to its impact in the supply chain and societal commitment. “Climate Protection and Energy Efficiency” is one of our five material sustainability topics and as such 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 a systematic, centralized GHG management on a group-wide and global scale. With “Climate Neutral 2040”, we established a clear roadmap and defined levers to reduce scope 1+2 emissions. And with our “Net Zero Value Chain”, we aim at reducing and ultimately neutralizing scope 3 value chain emissions. This firm ambition is reflected in our concrete successive climate goals: • 60% reduction of CO2e emissions by 2025 (base year: 2004) • 75% reduction of CO2e emissions by 2030 (base year: 2004) • Climate neutral by 2040 • Climate Neutral value chain by 2050.

Our 2030 targets are verified by the “Science-based Targets initiative” (SBTi).

In addition, beyond our own production processes we are using our knowledge and experience to develop products that either enable climate protection – like lubricants for wind turbines – or have a significantly lower emissions profile compared to their conventional counterparts and thus receive our brand name “Scopeblue®“. From 2050 on, we will only offer climate neutral products. To this end, we have developed an engine that automatically calculates the carbon footprint for LANXESS’ products – to enable us and our customers to make the right choices on their path to climate neutrality. The knowledge gained also supports our own climate protection and energy efficiency goals.
Reporting of environmental goals and data is available in the LANXESS Annual Report 2022, Sustainability section (pp 10-71), 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), - Sustainability (e.g. news, approach, material topics and targets, SDGs, Certificates & Commitment) *** All data above as per May 15th. 2023. *** 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 and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1, 2022

End date

December 31, 2022

Indicate if you are providing emissions data for past reporting years

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 or committee	Responsibilities for climate-related issues
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 (COO), 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 LANXESS' 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. 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 the Sustainability Committee, which manages all key issues relating to sustainability. Its members include all members of the Board of Management. The CEO is heading this committee. 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 the risk management process	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, initiating

		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 annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Overseeing and guiding employee incentives Reviewing and guiding strategy Overseeing and guiding scenario analysis	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. 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 the Sustainability Committee, which manages all key issues relating to sustainability. Its members include all members of the Board of Management. Five sub-committees 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” climate program › “Health, Safety & Environment” Sub-Committee – development of safe production sites › “Value Chain Circularity & Product Stewardship” Sub-Committee – 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 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 strategy of LANXESS.

		The Chief Financial Officer (CFO) is responsible for reviewing the business risks and the financial structure of LANXESS. 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 innovation/R&D priorities Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan Overseeing the setting of corporate targets Monitoring progress towards corporate targets Overseeing and guiding public policy engagement	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. The committee manages and monitors our climate strategy and ensures that the reduction targets for 2030 and 2040 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	Overseeing value chain engagement	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. It analyses, validates and monitors the LANXESS' 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.

Position or committee

Chief Operating Officer (COO)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
Monitoring progress against climate-related corporate targets

Coverage of responsibilities

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

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 (COO), 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.

Position or committee

Chief Executive Officer (CEO)

Climate-related responsibilities of this position

Implementing a climate transition plan
Integrating climate-related issues into the strategy
Setting climate-related corporate targets

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The CEO together with the other members of the Board of Management build the Sustainable Committee.

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 the Sustainability Committee, which manages all key issues relating to sustainability. Its members include all members of the Board of Management. Five sub-committees 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” climate program
› “Health, Safety & Environment” Sub-Committee – development of safe production sites
› “Value Chain Circularity & Product Stewardship” Sub-Committee – 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

Position or committee

Chief Financial Officer (CFO)

Climate-related responsibilities of this position

Conducting climate-related scenario analysis

Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

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. It analyses, validates and monitors the LANXESS' risk profile as well as the key opportunities, risks and measures, including climate related risks and opportunities.

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, initiating 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.

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	For details see next question C1.3a

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

Board/Executive board

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Shareholder approval of climate transition plan
Achievement of climate transition plan KPI
Reduction in absolute emissions

Incentive plan(s) this incentive is linked to

Long-Term Incentive Plan

Further details of incentive(s)

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. The absolute CO2 emission reduction targets were set aligned with climate transition plan. The achievement of the climate targets is monitored by the Supervisory Board , the highest body representing the shareholders. All Board of Management 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 met.
For the long term bonus 40% are linked to meet the pre-defined CO2e emission target for 2024 (Sustainability Performance Plan).

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The target for the absolute emission reduction was set in line with our mid-term climate targets. Therefore the climate targets go hand in hand to reach our ambitious climate transition plan.

Entitled to incentive

Corporate executive team

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Reduction in absolute emissions

Incentive plan(s) this incentive is linked to

Long-Term Incentive Plan

Further details of incentive(s)

The Sustainability Performance Plan, that reflects 40% of the LTI, is also applicable for the rest of the corporate executive team/ Board. So, 40% of the long term bonus is linked to meet the pre-defined CO2e emission target for 2024. (global coverage 100%).

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The target for the absolute emission reduction was set in line with our mid-term climate targets. Therefore the climate targets go hand in hand to reach our ambitious climate transition plan.

Entitled to incentive

All employees

Type of incentive

Monetary reward

Incentive(s)

Profit share

Performance indicator(s)

Energy efficiency improvement

Incentive plan(s) this incentive is linked to

This position does not have an incentive plan

Further details of incentive(s)

For all other employee groups, 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.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Our climate transition plan has the target to reach climate neutrality for scope 1 and 2 until 2040. Therefore it is necessary to get all employees behind that vision to reach that target. The big projects can't solve this target alone. Therefore, it is important to steadily reduce energy intensity to end up with climate neutrality for scope 1 and 2 until 2040.

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?

Definition: 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, the quantifiable indicator(s) used to define substantive financial or strategic impact is the expected EBITDA impact. All opportunities and risks including climate related ones have a substantive financial or strategic impact, if they meet one of the following criteria:
i) Opportunities and risks which have more than 1 m€ expected EBITDA-impact after countermeasures
ii) Risks which have an expected EBITDA impact, that was reduced by more than 10 m€ through the implementation of countermeasures
iii) New opportunities or risks which have an expected impact of more than 5 m€ after measures. These opportunities and risks 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. Further these thresholds guarantee, that risks that could jeopardize the future of the company as a going concern, are being detected.

b+c) Impact on LANXESS' reputation and on society and environment:
If an opportunity or a risk is evaluated with highest ranking (as defined below, i.e. "critical impact") according to an assessment of senior management in category b) or c) it will be also marked as opportunity or 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”. We have ensured that all risk categories mentioned in the TCFD are covered by our risk catalogue. 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 here. 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 the society and the 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).

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.

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 Opportunities
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): 16 LANXESS operations were under the rule of the EU-ETS in 2022 including HPM, which was reported as discontinued operations. The

		system will be revised periodically. There is a risk that during the next revisions the allocation rules for free industrial certificates will decrease to the maximum level of -2,5%/a from 2026. 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 twice 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. We assessed the risk by using the CO2e-prices published in the IEA, World Energy Model Documentation, multiplied by the scope 1&2 emissions of LANXESS not covered yet by a CO2-pricing scheme. For the worst case we used the IEA NZE (Net Zero Emissions by 2050 Scenario) -scenario. Our mid case is corresponding to the IEA "Stated Policies"-scenario. 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. 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	LANXESS considers the potential occurrence of acute physical risks related to climate change, such as extreme weather events. These events include heavy precipitation in the form of hail, rain or lightning; high winds in the form of thunderstorms, tornadoes, or hailstorms; floods, such as storm surges, coastal floods, or fluvial flooding; and heat events such as wildfires or heatwaves. Such occurrences or an increase of frequency or intensity of these weather events may have an impact on our locations, facilities, employees, or logistics. 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: In our risk assessment process, we evaluate the financial impact of acute physical risks from extreme weather events. 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	We identify and assess chronical climate-related-risks like sea level rise or heat stress for our locations worldwide. 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, more extensive 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 reduction requirements, carbon taxes or carbon fees in Europe

Currently a high 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 there´ll be circumventions to the decided EU Carbon Border Adjustment Mechanism (CBAM), as well as a gap of CO2-cost reliefs for products being exported from EU. CBAM is a target of the new EU Commission, however it is still a concept. One of the problems is mainly a limitation in WTO compatibility. So the risk is that the EU decides on tightening to the ETS/ CO2-tax system without having well elaborated and functioning 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. This risk would impact all our products made in the EU in plants that are actual not under EU-ETS.

LANXESS has a major footprint in Europe, with about 46% of net sales, 62% of employees and 74% of capex , but only 16 of the plants and sites are subject to European emissions trading, covering only ~33% of LANXESS' scope 1 emissions. Almost 50% of scope 1 emissions in Europe, our major region, are not under ETS. 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 uncoordinated 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)

16,700,000

Potential financial impact figure – maximum (currency)

37,200,000

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. 372 kt CO2e (Total scope 1 emissions in Europe [780kt] minus verified EU ETS emissions [408kt]) in the EU multiplied by the level of a regional or national CO2 tax price, i.e. to be 45 - 100 €/t in 2030. This assumption is based on the ETS II target price for 2027 and the EUA-price development in 2022. This leads to potential additional costs of some 16.7-37.2m€ p.a.

Calculation :
780 kt -408 kt= 372 kt
372 kt * 45 €/t = 16.7 m€
372 kt * 100 €/t = 37.2 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 up to 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 a) and those under b) 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: Up to 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. In the last two years EU green Deal, development of new technologies and announced partnerships are accelerating. 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.

For an specialty chemical company smart and state of the art processes are key be competitive, otherwise we have to shut down significant parts of production. 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) 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: The 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 k€ 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) additional to the existing European emission trading system (ETS). The BEHG taxes fuels and since 2023 substitutes like waste that have to be registered for energy taxation.
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.
In 2024 all other waste disposals that are to be destinated for burning in hazardous waste incineration plants will be charged as well.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
4,600,000

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 Chemparc sites of 60.000 t for 2022 with a carbon content of 60% with its CO2-freight and the CO2-tax in 2023. Each ton of carbon will be converted into ~3.6 t CO2.
Calculation:
60,000 t * 60% * 3.6 * 35 €/t = 4.6m€

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 two years. 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 8% of our sales, requested information on our climate protection activities through the CDP Supply Chain Program in 2023. 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)

80,000,000

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 8% of our sales in 2022 of 10,012m€ reduce demand by 10% (our estimation) due to a low CDP score this would result in following loss of sales p.a. :

Calculation:
10,012m€ x 10% * 8% = 80m€

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 up to 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 :
20m€ + 5 * 150,000€ = 20,750,000€

Comment

Identifier

Risk 5

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

Introduction:
LANXESS, a global specialty chemicals company, faces a significant risk associated with the potential introduction of CO2 taxes on its scope 1 and scope 2 emissions not under CO2 tax regime right now. While certain emissions are already subject to taxation, the expansion of tax regimes to include currently untaxed emissions could have profound implications for LANXESS' operations, financial performance, and competitive position.

The Risk of CO2 Taxes:
The primary risk for LANXESS lies in the potential financial burden imposed by CO2 taxes on its scope 1 and scope 2 emissions not under CO2 tax regime right now.

Currently, many countries are adopting or considering carbon pricing mechanisms as a means to reduce greenhouse gas emissions and mitigate climate change. These mechanisms often involve levying taxes on carbon emissions or implementing cap-and-trade systems.

Should CO2 taxes be extended to cover all scope 1 and scope 2 emissions, LANXESS would likely face increased costs. This could arise from the necessity to invest in emission reduction technologies, purchase carbon allowances in a cap-and-trade system, or simply pay higher taxes on emissions. The financial impact of these additional costs could reduce LANXESS' profitability and potentially affect its ability to compete in the market.

Competitive Disadvantage:
Another significant risk for LANXESS is the potential for a competitive disadvantage compared to companies operating in regions with less stringent or no CO2 taxation. If LANXESS operates in countries or regions that impose higher CO2 taxes, it may face higher production costs than competitors based in areas with lower or no taxation. This could erode LANXESS' competitiveness and result in the loss of market share to less burdened rivals.

Conclusion:
The risk of CO2 taxes being extended to cover LANXESS' scope 1 and scope 2 emissions poses significant challenges to the company. The financial burden and competitive disadvantages associated with such taxes necessitate proactive mitigation strategies. By investing in energy efficiency, renewable energy adoption, carbon offset projects, and engaging in advocacy efforts, LANXESS can navigate this risk and position itself as a sustainable and resilient player in the chemicals industry.

Time horizon

Medium-term

Likelihood

Unlikely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

110,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The method to estimate the financial impact of regional/national carbon price systems is based on the scope 1 and scope 2 emissions of LANXESS globally, but outside existing tax regimes. In total ~900 kt of scope 1 and scope 2 emissions were identified globally, that are not under carbon tax regimes right now.

For the CO2 prices the NZE (Net Zero Emissions by 2050 Scenario) of the IEA was used. This scenario shows a narrow but achievable pathway to achieve net zero CO2 emissions by 2050, with advanced economies reaching net zero emissions in advance of others. This scenarios is consistent with limiting the global temperature rise to 1.5°C. This scenario is updated on a yearly basis. As mentioned in the scenario we used the CO2 prices:
140 USD / t CO2 for advances economies with net zero emission pledges.
90 USD / t CO2 for emerging market and developing economies with net zero emission pledges.
25 USD / t CO2 for other emerging markets and developing economies.
Details for the country mapping to these three groups can be found in the official NZE scenario.

In a last step we multiplied on a country level the emissions not under carbon tax regime yet with the respective country specific CO2 price and sum up these values.

Simplified calculation:
900 kt scope 1+2 emissions x ~120 €/t CO2 = 110m€

So if we won't reduce our emissions at all, all our scope 1 and scope 2 would fall under carbon tax regime with the prices of the NZE scenario the gross risk would sum up to 110m€.

Cost of response to risk

20,000,000

Description of response and explanation of cost calculation

By fulfilling our 2030 target and becoming climate neutral until 2040 we will reduce our risk by ~1/3 until 2030 and by >90% until 2040. This ambitious emission reduction pathway will be reached with:
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 up to100 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 a) and those under b) 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: Up to 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

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 =30m€
Maximum:
30kt * 3.00€/kg=90m€

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

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 the main 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 the integrated raw material base in hydrofluoric acid and phosphorus chemicals, we are ideally set up for the manufacture of LiPF6 and thus ensure the supply of a LiPF6 based electrolyte production in Europe.
LANXESS also believes it is well positioned to meet the growing demand for battery chemicals based on the fact that all relevant production assets are located at Leverkusen Chemparc, an environment with lots of chemical history, relevant permits, logistics services and a highly skilled workforce that knows how to handle these kind of chemistries. This is a unique setup with in the whole of Europe for a local LiPF6 production. Thus, LANXESS offers key raw materials and an integrated asset structure for electrolyte and LiPF6 manufacturers to establish a local LiPF6 production in Europe and has started a cooperation with TINCI, a globally leading manufacturer of electrolytes, to produce electrolyte formulations in Leverkusen. Furthermore, LANXESS cooperates with the Canadian company Standard Lithium Ltd. for the commercial production of battery-grade lithium from brine that LANXESS is mining in El Dorado,

Arkansas, USA, to produce bromine products. A next step is the result of the currently ongoing “Definitive Feasibility Study to provide information on the technical and commercial parameters of the process for 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)

63,000,000

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 > 400 GWh in 2025 and more than 1000 GWh in 2030. Major cell manufacturers have started to ramp-up cell production sites in Europe and a total cell capacity of >300 GWh will be build up until 2025. According to the P3 Group the value for battery materials is expected to grow to approx. 15bn€ by 2025 (based on 300 GWh installed cell capacity) including chemicals for electrolyte, cathode, anode and separator. According to Avicenne Energy and Deutsche Bank, electrolytes represent ca. 10% 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 calculate with 80% raw material cost as part of production cost for the electrolytes manufacturer, the raw materials for electrolyte salt (LiPF6) will have a value of approx. 420m€ in Europe.

Calculation
15bn€ x 10% x 50% x (1-30%) x 80%= 420m€

LANXESS is backwards integrated and can significantly participate in the LiPF6 production with the key raw materials hydrofluoric acid, phosphorus chemicals and Li-chemicals. LANXESS is well positioned and has an integrated asset network, so a ~15% market share of the ~420m€ of raw materials in Europe, leading to ~63m€ sales, seems to be a realistic opportunity. To clarify: The opportunity is solely based on selling raw materials into that developing industry, further downstream steps to be evaluated

later on.

Calculation: 15% * 420 m€ = ~ 63 m€

Cost to realize opportunity

750,000

Strategy to realize opportunity and explanation of cost calculation

Strategy to realize Opportunity:
As of January 2021, the new LANXESS 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 five full-time employees.

Cost to realize opportunity:
The Initiative creates costs of ~0.75m€ p.a. This includes mainly the personnel costs of the 5 employees.

Calculation:
5 employees* 150,000€ p.a. = 750,000€

Case study:
Situation: LANXESS will drive the opportunity with thorough focus to create additional sales especially for the new mobility sector, i.e. LiPF6 for batteries.
Task: In order to have a cross functional approach the initiative is working on new concepts for innovation and marketing in battery technology. One task was to find a partner to become an important player on the battery market.
Action: The newly created business development positions analyse the different technologies and players in the market like TINCI and coordinate the R&D activities and go-to market approaches for the different Business Units.
Result: LANXESS will be able to generate new contracts for battery technologies.
Timescale: The initiative had been founded already, employees are hired and we are trying to realize 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 m³ in 2030, creating a shortfall of 2,700 bn m³. 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 2022-2027, with higher growth rates for the specialty segments. As shown in several market studies the ion exchange market will increase from 1.8bn€ in 2022 to 2.2bn€ in 2027. LANXESS's approach is win a significant share of this additional sales of ~400m€ 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)

60,000,000

Potential financial impact figure – maximum (currency)

120,000,000

Explanation of financial impact figure

The market for ion exchange resins will grow at a CAGR of 4% from 2022-2027, with higher growth rates for the specialty segment. This will increase the market from 1.8bn€ in 2022 to 2.2bn€ in 2027. leading to additional 400m€ Sales per Year.
Calculation: 2,200m€-1,800m€= 400m€

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 60-120m€ per annum.

Calculation:
Min: 15%*400m€ = 60m€
Max: 30%*400m€ =120m€

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 climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

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

Publicly available climate transition plan

Yes

Mechanism by which feedback is collected from shareholders on your climate 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 climate transition plan (optional)

LANXESS Climate Transition Plan.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	1.5ºC	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.
Transition scenarios IEA STEPS (previously IEA NPS)	Company-wide		The Stated Policies Scenario (STEPS) is exploratory, in that it defines a set of starting conditions, such as policies and targets, and then see where it leads based on model representations of energy systems, including market dynamics and technological progress. STEPS is a scenario which reflects current policy settings based on a sector-by-sector and country by country assessment of the specific policies that are in place, as well as those that have been announced by governments around the world. STEPS is one of the scenarios that forms the basis for our regulatory risk assessment. The applicable CO2e-prices published in the IEA, World Energy Model Documentation, multiplied by our scope 1&2 emissions that are not covered yet by a CO2-pricing scheme.
Transition scenarios IEA NZE 2050	Company-wide		The Net Zero Emissions by 2050 Scenario (NZE). This is a normative IEA scenario that shows a narrow but achievable pathway for the global energy sector to achieve net zero CO2 emissions by 2050, with advanced economies reaching net zero emissions in advance of others. This scenario also meets key energy-related United Nations Sustainable Development Goals (SDGs), in particular by achieving universal energy access by 2030 and major improvements in air quality. The NZE does not rely on emissions reductions from outside the energy sector to achieve its goals, but assumes that non-energy emissions will be reduced in the same proportion as energy emissions. It is consistent with limiting the global temperature rise to 1.5 °C without a temperature overshoot (with a 50% probability). The objective is to show what is needed across the main sectors by various actors, and by when, for the world to achieve net zero energy related and industrial process CO2emissions by 2050 while meeting other energy-related sustainable

			development goals.
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.
Physical climate scenarios RCP 8.5	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. Methodology: Besides our own internal analysis regarding climate-related risks and opportunities our experts commissioned a natural hazard portfolio analysis from the Climate Change Resilience Services of Zurich Insurance Company Ltd for the first time in 2022. The portfolio analysis was performed based on Natural Hazard (Current risk) and Climate Change (Future risk) for warming scenarios SSP1-2.6 (sustainability scenario), SSP2-4.5 (middle-road scenario) and SSP5-8.5 (fossil fuel development scenario) and the 2030 (near term), 2050 (mid-long term) and 2100 (long term) horizons. The analysis includes acute climate-related-risks such as extreme precipitation (hail, rain, snow/ice, lightning), wind (storm, windstorm, tornado, hailstorm), floods (storm surge, coastal, fluvial), heat (wildfire, heat) as well as chronical climate-related-risks like sea level rise or heat stress. The analysis helps us to identify, assess and mitigate physical climate-related-risks at our sites and adapt to current and future climate risks . Product margins: We calculated the margin loss based on constant actual product prices and margins.

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:

Which sites of LAXESS need to be considered as potentially affected by significant physical climate-related-hazards such as changes in water availability, precipitation patterns or temperature variability within the next 10-30 years?

e.g. Water:
All LANXESS production sites are assessed once a year. Last assessment was done based on 2022 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:
Based on the scenario analysis for transitional climate risks, what are the implications in different transition speeds in individual regions, and the main drivers for the different transition speeds?

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%) as well as the goal to become a water stewardship site, strategic decisions have been 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 were 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	1) 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 have our "Net Zero Value Chain", where we aim at reducing and ultimately neutralizing scope 3 value chain emissions. 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 and until 2050 for scope 3. 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, that it is 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) 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 Supply and Value Chain and to support the transition we established "Net Zero Value Chain" for neutralizing scope 3 value chain emissions until 2050. This 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 and until 2050 for scope 3. 3)CASE STUDY: SITUATION: In the automotive sector the climate driven change to light vehicles has started years ago. TASK: LANXESS 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) 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 and until 2050 for scope 3. 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. These projects and other measures helping us to reach our 2025 target by 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 Capital allocation Acquisitions and divestments Liabilities	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. 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: These projects and other measures helping us to reach our 2025 target by 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 climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition
Row 1	Yes, we identify alignment with our climate transition plan

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's climate transition.

Financial Metric

Revenue/Turnover

Type of alignment being reported for this financial metric

Alignment with our climate transition plan

Taxonomy under which information is being reported

Objective under which alignment is being reported

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)

15,606,000

Percentage share of selected financial metric aligned in the reporting year (%)

0.2

Percentage share of selected financial metric planned to align in 2025 (%)

8

Percentage share of selected financial metric planned to align in 2030 (%)

17

Describe the methodology used to identify spending/revenue that is aligned

Reporting year assumption:
We reported the aligned Sales according to the EU taxonomy.
In the reporting year 2022, LANXESS generated 8% of its external sales with products

allocable to taxonomy-eligible activities. The remaining 92% of sales relate to products that are not included in the taxonomy's activity categories.
As LANXESS's taxonomy-eligible sales result exclusively from production, the company's main business activity, we disclose the figures at Group level and do not otherwise present them in clusters. In 2022, LANXESS generating total sales of 638 m€ classified as taxonomy-eligible. The taxonomy-aligned sales in the reporting year were less than 1%. These sales were reported as aligned with the climate transition plan.

2025 and 2030 assumptions:
Since LANXESS is a specialty chemicals company with several thousands of products it is hard to analyse for each end every product the attribute, if this product is still needed in an fully transformed economy. Of course we have implemented many Scopeblue products, which we sold in 2022, and beside that there are many more carbon reduced products, that will fit into a transformed economy. So we try to find the best estimator for this share of sales. Therefore we took the 2021 baseline for our scope 1 and 2 and scope 3 targets and estimated the sales share of aligned products via targeted emission reductions.

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

Target reference number

Abs 1

Is this a science-based target?

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

Target ambition

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, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

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

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

Base year total 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, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

Base year total 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)

1,235,000

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

1,231,000

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

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

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

Total 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)

2,466,000

Does this target cover any land-related emissions?

Yes, it covers land-related CO2 emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

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

123.2357015387

Target status in reporting year

Underway

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 for scope 1 and 2 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 SBTi and CDP approach. Our 2030 is already SBTi approved and our Net zero target is currently reviewed by the SBTi.

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

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Target reference number

Abs 2

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

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2021

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

1,392,366

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

1,346,439

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

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

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

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

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

2,738,805

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, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

Base year total 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 (%)

41.6

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

1,599,462.12

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

1,235,000

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

1,231,000

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

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

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

Total 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)

2,466,000

Does this target cover any land-related emissions?

Yes, it covers land-related CO2 emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

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

23.9440650211

Target status in reporting year

Underway

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 for scope 1 and 2 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 SBTi and CDP approach. Our 2030 target is already SBTi approved and our Net zero target is currently reviewed by the SBTi.

The target of 1600kt was set end of 2021 based on the forecast of 2021 figures.

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

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Target reference number

Abs 3

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

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, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

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

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

Base year total 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, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

Base year total 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)

1,235,000

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

1,231,000

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

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

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

Total 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)

2,466,000

Does this target cover any land-related emissions?

Yes, it covers land-related CO2 emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

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

24.701549006

Target status in reporting year

Underway

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 for scope 1 and 2 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 SBTi and CDP approach. Our 2030 target is already SBTi approved and our Net zero target is currently reviewed by the SBTi.

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

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Target reference number

Abs 4

Is this a science-based target?

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

Target ambition

2°C aligned

Year target was set

2021

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, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

9,254,857

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

569,000

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

438,211

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

285,000

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

784,871

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

3,113

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

19,368

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

30,222

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

531,771

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

0

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

0

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

0

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

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

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

11,916,413

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

11,916,413

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, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

100

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

100

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

100

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

100

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

100

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

100

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

100

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

100

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

100

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

100

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

100

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

100

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

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

100

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 (%)

11.1

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

10,593,691.157

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, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

7,647,300

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

621,000

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

654,700

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

371,300

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

641,700

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

10,700

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

19,600

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

30,800

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

168,500

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

0

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

0

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

0

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

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

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

10,165,600

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

10,165,600

Does this target cover any land-related emissions?

Yes, it covers land-related CO2 emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

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

132.3644127649

Target status in reporting year

Underway

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 SBTi 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-life 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-life” (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 SBTi 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

In 2021, we decided to set a 2030 target in line with the SBTi rules, i.e. to reduce 11.1% based on the final baseline of 2021. This target was submitted directly to SBTi at the beginning of 2022 after the final values for the Scope 3 categories were determined and it was approved by the SBTi.

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

Target reference number

Abs 5

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

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, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

9,254,857

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

569,000

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

438,211

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

285,000

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

784,871

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

3,113

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

19,368

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

30,222

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

531,771

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

0

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

0

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

0

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

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

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

11,916,413

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

11,916,413

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, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

100

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

100

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

100

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

100

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

100

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

100

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

100

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

100

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

100

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

100

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

100

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

100

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

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

100

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

100

Target year

2050

Targeted reduction from base year (%)

100

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

0

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, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

7,647,300

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

621,000

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

654,700

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

371,300

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

641,700

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

10,700

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

19,600

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

30,800

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

168,500

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

0

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

0

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

0

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

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

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

10,165,600

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

10,165,600

Does this target cover any land-related emissions?

Yes, it covers land-related CO2 emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

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

14.6924498169

Target status in reporting year

New

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 SBTi 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-life 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-life” (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 SBTi 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 in a first step. 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

C4.2

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

Net-zero target(s)

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?

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

Please explain target coverage and identify any exclusions

We want to be climate neutral for Scope 1 and 2 emissions until 2040. This is even more ambitious than what is required by the SBTi. 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)

Target reference number

NZ2

Target coverage

Company-wide

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

Abs5

Target year for achieving net zero

2050

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

Please explain target coverage and identify any exclusions

All Scope 3 categories are covered.

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

Our scope 3 strategy will focus on the biggest categories in a first step. 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).

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	42	
To be implemented*	24	10,650
Implementation commenced*	23	4,730
Implemented*	60	31,410
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 buildings
Insulation

Estimated annual CO2e savings (metric tonnes CO2e)

200

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

Scope 2 (market-based)

Voluntary/Mandatory

Mandatory

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

30,000

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

129,000

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

Replacement of windows, insulation of tank or pipelines (4 Projects)

Initiative category & Initiative type

Energy efficiency in buildings

Maintenance program

Estimated annual CO2e savings (metric tonnes CO2e)

7,728

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

Scope 1

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

6,138,000

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

20,285,000

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

Installation of new compressors pumps or boilers, change in building heating (8 Projects)

Initiative category & Initiative type

Energy efficiency in buildings

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

75

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)

14,000

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

86,000

Payback period

4-10 years

Estimated lifetime of the initiative

6-10 years

Comment

Switch from conventional lighting to LED (5 Projects)

Initiative category & Initiative type

Energy efficiency in production processes

Waste heat recovery

Estimated annual CO2e savings (metric tonnes CO2e)

4,370

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

Scope 1

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

2,450,000

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

174,500

Payback period

<1 year

Estimated lifetime of the initiative

11-15 years

Comment

Recycle waste heat in processes or using it to pre-heat water and building heating (17 Projects)

Initiative category & Initiative type

Energy efficiency in production processes

Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)

1,812

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

Scope 1

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

181,000

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

0

Payback period

<1 year

Estimated lifetime of the initiative

21-30 years

Comment

Switch off unnecessary cooling circuits or optimizing their control (5 Projects)

Initiative category & Initiative type

Energy efficiency in production processes

Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

3,195

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

Scope 1

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

975,000

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

521,000

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Reduction of electricity consumption by modifying the plant or plant components (e.g. pumps or ventilation) or optimization of processes. (19 Projects)

Initiative category & Initiative type

Low-carbon energy consumption

Low-carbon electricity mix

Estimated annual CO2e savings (metric tonnes CO2e)

14,030

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

3-5 years

Comment

Sourcing of green electricity at 4 production sites in China and USA

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. Up to 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

The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Chemicals and plastics

Other, please specify

All products that are eligible for the EU taxonomy were analysed to determine whether they are also aligned with the taxonomy.

Description of product(s) or service(s)

Economic activities that LANXESS classifies as taxonomy-eligible:
- LANXESS produces high-quality plastics for a broad range of applications – from the automotive and electrical/electronics industries to water treatment. These products correspond to activity 3.17 “Manufacture of plastics in primary form” defined in Annexes I and II of the relevant Delegated Regulation.
- Adipic acid is a precursor that is in very high demand in the plastics industry, e.g. for polyamides or polyurethanes. This product is allocated to activity 3.14 "Manufacture of organic basic chemicals". All other products described there are not manufactured by LANXESS.
- LANXESS also produces components for battery manufacturing, which fall under activity 3.4 “Manufacture of batteries” defined in Annexes I and II of the relevant Delegated Regulation.

Taxonomy-aligned activities:
The analyses performed identified economic activity 3.4 “Manufacture of batteries” as making a substantial contribution to climate change mitigation,
as our battery components are intended for ion batteries, which are mainly used for electric cars. Economic activity 5.4 “Renewal of waste water collection and treatment” has a positive effect because, based on a two-year time horizon, it achieves an energy saving of more than 20% compared to the starting point.

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

No

Methodology used to calculate avoided emissions

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

Functional unit used

Reference product/service or baseline scenario used

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

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

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

0.2

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

International Flavors & Fragrances Inc. (IFF)

Details of structural change(s), including completion dates

July 1, 2022, completed acquisition of the International Flavors & Fragrances Inc. (1 production site),

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 International Flavors & Fragrances Inc. (as of July 1st, 2022) the new production site was included in the environmental figures pro rata.

C5.1c

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

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	Yes	Scope 1 Scope 2, market-based Scope 3	We recalculated the baseline in line with GHG Protocol	No

C5.2

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

Scope 1

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

1,392,366

Comment

Scope 2 (location-based)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

1,625,172

Comment

Scope 2 (market-based)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

1,346,439

Comment

Scope 3 category 1: Purchased goods and services

Base year start
January 1, 2021

Base year end
December 31, 2021

Base year emissions (metric tons CO2e)
9,254,857

Comment

Scope 3 category 2: Capital goods

Base year start
January 1, 2021

Base year end
December 31, 2021

Base year emissions (metric tons CO2e)
569,000

Comment

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

Base year start
January 1, 2021

Base year end
December 31, 2021

Base year emissions (metric tons CO2e)
438,211

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

285,000

Comment

Scope 3 category 5: Waste generated in operations

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

784,871

Comment

Scope 3 category 6: Business travel

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

3,113

Comment

Scope 3 category 7: Employee commuting

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

19,368

Comment

Scope 3 category 8: Upstream leased assets

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

30,222

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

531,771

Comment

Scope 3 category 10: Processing of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

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, 2021

Base year end

December 31, 2021

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, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

5,834,000

Comment

Scope 3 category 13: Downstream leased assets

Base year start

January 1, 2021

Base year end

December 31, 2021

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, 2021

Base year end

December 31, 2021

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, 2021

Base year end
December 31, 2021

Base year emissions (metric tons CO2e)
0

Comment
The percentage of total CO2e Scope 3 emissions from our Joint Ventures is insignificant (below 0,1 %)

Scope 3: Other (upstream)

Base year start
January 1, 2021

Base year end
December 31, 2021

Base year emissions (metric tons CO2e)
0

Comment
Not relevant

Scope 3: Other (downstream)

Base year start
January 1, 2021

Base year end
December 31, 2021

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)

1,235,000

Comment

All figures in this questionnaire are including the Business Unit High Performance Materials, which was reported as discontinued operations in the annual report 2022.

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

1,345,000

Scope 2, market-based (if applicable)

1,231,000

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 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, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source of excluded emissions

Storage-only and office facilities

Scope(s) or Scope 3 category(ies)

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

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

Emissions are not relevant

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

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

1

Estimated percentage of total Scope 3 emissions this excluded source represents

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.

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)

7,647,300

Emissions calculation methodology

Hybrid method

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

9

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. For data accuracy enhancement, emission factors have been requested by LANXESS from suppliers. If respective data has been provided in accordance with industrial standards, supplier specific emission factors replace data from LCA/PCF data bases.
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”.

Transportation Emissions
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.
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”.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

621,000

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)

654,700

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)

371,400

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)

641,800

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)

10,700

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 kilometres for short-, medium- and long-haul flights and travelled kilometres by rail have been determined as an extrapolation of the hotel stays. The percentage increase in hotel stays was transferred to the travel kilometres. 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)

19,600

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)

30,900

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: Leased cars: The LANXESS Fleet Management determined the number of leased vehicles and the vehicle kilometres 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 kilometres 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)

168,600

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)

4,486,400

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 as of 30th January 2023. 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.
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 was multiplied by the carbon content.
8. A safety markup (20%) for the sales is added for products that can’t be converted into metric ton and for products that are missing data. This means that 17% of the emissions are extrapolated.

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	298,000	

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

0.0002463

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

2,466,000

Metric denominator

unit total revenue

Metric denominator: Unit total

10,012,000,000

Scope 2 figure used

Market-based

% change from previous year

28.2

Direction of change

Decreased

Reason(s) for change

Other emissions reduction activities
Acquisitions
Change in output
Change in revenue

Please explain

Total revenues increased by 32.6% mainly due to inflation effects, while combined scope 1 and scope 2 emissions decreased by approximately 4.8% compared to 2021. The decrease in emissions is mainly due to changes in production volume and our implemented CO2 reduction projects (-17,380 t; see question 4.3a).

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	2,079	IPCC Sixth Assessment Report (AR6 - 100 year)
N2O	288,319	IPCC Sixth Assessment Report (AR6 - 100 year)
HFCs	152	IPCC Sixth Assessment Report (AR6 - 100 year)
CO2	944,450	IPCC Sixth Assessment Report (AR6 - 100 year)

C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO2e)
Argentina	1,203
Australia	0
Belgium	413,562
Brazil	4,496
Canada	14,814
China	12,568
France	432
Germany	277,517
India	23,193
Italy	230
Japan	0
Mexico	232
Netherlands	64,827
Russian Federation	1
Singapore	13
Taiwan, China	3
United Kingdom of Great Britain and Northern Ireland	23,796
United States of America	393,980
South Africa	4,133

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	417,115
Specialty Additives	189,615
Consumer Protection	217,650
All other segments	410,620

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	1,235,000	

C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Argentina	498	846
Australia	131	168
Belgium	71,148	22,005
Brazil	1,436	2,014
Canada	5,525	2,463
China	93,740	78,051
France	260	94
Germany	855,856	854,092
India	33,624	31,674
Italy	15,512	13,646
Japan	353	292
Mexico	4,180	1,400
Russian Federation	84	53
Singapore	181	192
Netherlands	58,978	43,785

Taiwan, China	3,962	2,879
United Kingdom of Great Britain and Northern Ireland	3,496	409
United States of America	189,804	169,785
South Africa	6,232	7,152

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	651,060	644,563
Specialty Additives	260,638	219,421
Consumer Protection	299,751	267,382
All other segments	133,551	99,634

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

No

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	1,345,000	1,231,000	

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?

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	3,400	Decreased	0.13	In 2022 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 (2,591,000t) the emissions decrease by about 0.13%. [Calculation: (-3,400 / 2,591,000) x 100 = -0.13%].
Other emissions reduction activities	31,410	Decreased	1.21	In 2022 LANXESS reduced its Scope 1 and Scope 2 emissions by about 17,380 metric tons (t) of CO2e from implementing 58 emission reduction activities. Compared to the total Scope 1 and Scope 2 emissions issued in the previous year (2,591,200 t) we reduced the emissions by about 1.21%. [Calculation: -31,410/ 2,591,000) x 100 = -1.21%].
Divestment	0	No change	0	No change within the reporting year
Acquisitions	120,000	Increased	4.63	In 2021 LANXESS acquired Emerald Kalama Chemical & Theseo Group. The Scope 1 and Scope 2 emissions were considered pro rata for 2021 (104,200 t). In 2022 the full year emissions of the acquisition were considered, which means that the emissions increased by another 115,000t. In 2022 LANXESS also acquired the International Flavors & Fragrances Inc. and considered the emissions for 2022 pro rata (5,000 t). In total the emissions increased by 120,000 t or 4.63% from acquisition in

				the reporting year. [Calculation: (120,000/ 2,591,000) x 100 = 4.63%].
Mergers	0	No change	0	No change within the reporting year
Change in output	210,000	Decreased	8.1	The decreased volume of products sold in the reporting year, led also to lower Scope 1 and Scope 2 emissions. Calculated on decreased volume of products sold and assumed that no emission reduction activities would have been realized, the CO2e emission would have higher by 210,00 metric tons (t) or 8.10% [Calculation: (-210,000/ 2,591,000) x 100 = -8.10%]
Change in methodology	0	No change	0	No change within the reporting year
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 10% but less than or equal to 15%

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)	926,510	3,199,670	4,126,180
Consumption of purchased or acquired electricity		142,970	1,590,050	1,733,020
Consumption of purchased or acquired heat		0	5,920	5,920
Consumption of purchased or acquired steam		0	1,852,250	1,852,250
Consumption of purchased or acquired cooling		0	151,730	151,730
Consumption of self-generated non-fuel renewable energy		270		270
Total energy consumption		1,069,750	6,799,620	7,869,370

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

926,510

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

3,199,670

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

4,126,180

Consumption of purchased or acquired electricity

MWh consumed from renewable sources inside chemical sector boundary

142,970

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

1,590,050

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

1,733,020

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)

5,920

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

5,920

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)

1,852,250

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

1,852,250

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)

151,730

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

151,730

Consumption of self-generated non-fuel renewable energy

MWh consumed from renewable sources inside chemical sector boundary

270

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

270

Total energy consumption

MWh consumed from renewable sources inside chemical sector boundary

1,069,750

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

6,799,620

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

7,869,370

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

926,510

MWh fuel consumed for self-generation of electricity

463,255

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

463,255

Comment

Other renewable fuels (e.g. renewable hydrogen)

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

Coal

Heating value

LHV

Total fuel MWh consumed by the organization

42,180

MWh fuel consumed for self-generation of electricity

21,090

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

21,090

Comment

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

17,720

MWh fuel consumed for self-generation of electricity

8,860

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

8,860

Comment

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

3,115,710

MWh fuel consumed for self-generation of electricity

1,557,855

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

1,557,855

Comment

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

Heating value

LHV

Total fuel MWh consumed by the organization

24,060

MWh fuel consumed for self-generation of electricity

12,030

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

12,030

Comment

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

4,126,180

MWh fuel consumed for self-generation of electricity

2,063,090

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

2,063,090

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	2,063,090	2,063,090	463,255	463,255
Heat	0	0	0	0
Steam	2,063,090	2,063,090	463,255	463,255
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)

2,063,090

Generation that is consumed inside chemicals sector boundary (MWh)

2,063,090

Generation from renewable sources inside chemical sector boundary (MWh)

463,255

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)

2,063,090

Generation that is consumed inside chemicals sector boundary (MWh)

2,063,090

Generation from renewable sources inside chemical sector boundary (MWh)

463,255

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.

Country/area of low-carbon energy consumption

United States of America

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Solar

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

10,000

Tracking instrument used

US-REC

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

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

Comment

Country/area of low-carbon energy consumption

United Kingdom of Great Britain and Northern Ireland

Sourcing method

Project-specific contract with an electricity supplier

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

52% Wind, 26% Biomass, 16% Solar, 6% Hydropower

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

8,500

Tracking instrument used

REGO

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

United Kingdom of Great Britain and Northern Ireland

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

Comment

Country/area of low-carbon energy consumption
China

Sourcing method
Project-specific contract with an electricity supplier

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify
50% Wind, 50% Photovoltaic

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
4,400

Tracking instrument used
I-REC

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

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

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

Comment

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

Argentina

Consumption of purchased electricity (MWh)

1,830

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

1,830

Country/area

Austria

Consumption of purchased electricity (MWh)

190

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

190

Country/area

Belgium

Consumption of purchased electricity (MWh)

333,160

Consumption of self-generated electricity (MWh)

0

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

105,880

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

439,040

Country/area

Brazil

Consumption of purchased electricity (MWh)

15,600

Consumption of self-generated electricity (MWh)

150

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

15,750

Country/area

Canada

Consumption of purchased electricity (MWh)

32,910

Consumption of self-generated electricity (MWh)

0

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

13,030

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

45,940

Country/area

China

Consumption of purchased electricity (MWh)

63,940

Consumption of self-generated electricity (MWh)

50

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

104,060

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

168,050

Country/area

France

Consumption of purchased electricity (MWh)

4,490

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

4,490

Country/area

Germany

Consumption of purchased electricity (MWh)

655,710

Consumption of self-generated electricity (MWh)

20

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

2,193,770

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

2,849,500

Country/area

India

Consumption of purchased electricity (MWh)

36,030

Consumption of self-generated electricity (MWh)

50

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

18,700

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

54,780

Country/area

Italy

Consumption of purchased electricity (MWh)

15,360

Consumption of self-generated electricity (MWh)

0

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

45,980

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

61,340

Country/area

Japan

Consumption of purchased electricity (MWh)

740

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

740

Country/area

Mexico

Consumption of purchased electricity (MWh)

1,580

Consumption of self-generated electricity (MWh)

0

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

8,900

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

10,480

Country/area

Netherlands

Consumption of purchased electricity (MWh)

59,460

Consumption of self-generated electricity (MWh)

0

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

153,770

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

213,230

Country/area

Russian Federation

Consumption of purchased electricity (MWh)

275

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

275

Country/area

Singapore

Consumption of purchased electricity (MWh)

505

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

505

Country/area

South Africa

Consumption of purchased electricity (MWh)

6,740

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

6,740

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)

25,950

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

25,950

Country/area

Taiwan, China

Consumption of purchased electricity (MWh)

1,770

Consumption of self-generated electricity (MWh)

0

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

5,680

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

7,450

Country/area

United States of America

Consumption of purchased electricity (MWh)

476,780

Consumption of self-generated electricity (MWh)

0

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

476,780

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

2,686

Total consumption unit

thousand cubic metres

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

1.92

Heating value of feedstock, MWh per consumption unit

10.62

Heating value

HHV

Comment

We have assumed that an amount equivalent to approximately 1% of the amount of natural gas used for power generation is used as feedstock.

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	40

Natural Gas	3
Coal	1
Biomass	1
Waste (non-biomass)	2
Fossil fuel (where coal, gas, oil cannot be distinguished)	6
Unknown source or unable to disaggregate	47

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

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

Radical process redesign

Stage of development in the reporting year

Large scale commercial deployment

Average % of total R&D investment over the last 3 years

1

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

2

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

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 10 m€ in its construction. A second, larger plant is under construction and scheduled to start up in 2024 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.

Technology area

Other, please specify

Supporting Transition via green products

Stage of development in the reporting year

Pilot demonstration

Average % of total R&D investment over the last 3 years

1

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

20

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

Lithium is a necessary prerequisite for the transition into electromobility and high performance batteries for renewable electricity. Together with a partner we develop a superior process to extract lithium from brine solution in Arkansas, USA. The brine is pumped to surface anyway for bromine extraction, leading to a very lean and efficient overall process. While a small scall pilot plant was very successful, we now have to build and operate a full scale pilot plant.
This will lower our scope 3 emissions with regard to Raw material and transport emissions supporting our Net Zero 2050 target.

Technology area

Process step integration

Stage of development in the reporting year

Applied research and development

Average % of total R&D investment over the last 3 years

1

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

1

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

CO2 reduction via process optimization for plant in Leverkusen. Development of a modern direct separation technology for product and by-products, instead of multistep chemical separation process.
A mixture of two isomers of this product is not separable by distillation. At the moment, it is chemically derivatized, separated by distillation, and then chemically transformed back into the original entity.
We are investigating, if modern separation methods like SMB (simulated moving bed) chromatography are a versatile technology for an industrial scale separation for this difficult to handle system. The CO2 savings for scope 1+2 are based on completely skipping two chemical process steps and will help us to reach our 2040 climate neutral target for scope 1+2

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

2022 AR LXS_web.pdf

Page/ section reference
Page 29 and Pages 258-259

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

2022 AR LXS_web.pdf

Page/ section reference
Page 29 and Pages 258-259

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

2022 AR LXS_web.pdf

Page/ section reference

Page 29 and Pages 258-259

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

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_audit_opinion_LXS_2022_EN.pdf

Page/section reference

Pages 3-11

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 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 29 and Pages 258-259) 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 29 and Pages 258-259) 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 29 and Pages 258-259) 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 29 and Pages 258-259) 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 29 and Pages 258-259) 1

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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

Other carbon tax, please specify

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

Other carbon tax, please specify

German BEHG

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

33

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2022

Period end date

December 31, 2022

Allowances allocated

757,589

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

407,802

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, 2022

Period end date

December 31, 2022

% of total Scope 1 emissions covered by tax

1

Total cost of tax paid

511,000

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.

Other carbon tax, please specify

Period start date

January 1, 2022

Period end date

December 31, 2022

% of total Scope 1 emissions covered by tax

2

Total cost of tax paid

43,400

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.

Other carbon tax, please specify

Period start date

January 1, 2022

Period end date

December 31, 2022

% of total Scope 1 emissions covered by tax

3

Total cost of tax paid

1,200,000

Comment

German BEHG: Some of LANXESS' chemical plants that are out of the scope of the ETS consume natural gas that is subject to the BEHG. The aim is to comply with all the compliance requirements and to be one of the most efficient players in every area. These plants are embedded in our group-wide energy and environment management system.

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
In principal our site in Elmira is in the process of applying to the OBPS program which should reduce these costs going forward. The OBPS is applying for fuels and CO2-intensive plants >50.000 t CO2 p.a.. 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.

German ETS
With regard to the German BEHG, some of LANXESS' chemical plants that are out of the scope of the ETS consume natural gas that is subject to the BEHG. The aim is to comply with all the compliance requirements and to be one of the most efficient players in every area. These plants 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 reduce the CO2-princing burdens under the BEHG.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

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.

Type of internal carbon price

Shadow price

How the price is determined

Social cost of carbon

Objective(s) for implementing this internal carbon price

Change internal behavior

Scope(s) covered

Scope 1
Scope 2

Pricing approach used – spatial variance

Uniform

Pricing approach used – temporal variance

Static

Indicate how you expect the price to change over time

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)

135

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)

135

Business decision-making processes this internal carbon price is applied to

Operations

Mandatory enforcement of this internal carbon price within these business decision-making processes

No

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan

Application: 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.

Implication: 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.

Type of internal carbon price

Shadow price

How the price is determined

Alignment with the price of allowances under an Emissions Trading Scheme
Alignment with the price of a carbon tax

Objective(s) for implementing this internal carbon price

Drive energy efficiency
Drive low-carbon investment
Identify and seize low-carbon opportunities
Stress test investments

Scope(s) covered

Scope 1
Scope 2

Pricing approach used – spatial variance

Differentiated

Pricing approach used – temporal variance

Static

Indicate how you expect the price to change over time

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)

50

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)

150

Business decision-making processes this internal carbon price is applied to

Capital expenditure
Product and R&D
Risk management

Mandatory enforcement of this internal carbon price within these business decision-making processes

Yes, for some decision-making processes, please specify

Mandatory for all M&A projects, capital expenditure projects above 3m€, energy efficiency Projects and carbon reduction projects

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan

Application: Investment projects (capital expenditure, acquisitions, energy efficiency measures, carbon reduction projects)

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.

For our analysis of the risks of increasing CO2 regimes worldwide we used different CO2 prices for different countries and years in line with the IEA scenarios.

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

26

% total procurement spend (direct and indirect)

72

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

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.
LANXESS´s selection of suppliers for reporting follows two aims: (a) encouragement for sustainability and (b) avoiding supplier related risks. Thus, this request for reporting is also a cornerstone of our supplier engagement strategy.
A number of key factors are considered for the identification of suppliers to participate in this initiative. Beside procurement spend , we look at various other factors that have a significant impact on the supplier relationship: Raw material emissions, 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.

Rational:
This process, known as XCORE, for contract values > 5 m€, 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.
By assessing all of our suppliers with regard to this criteria, we identified our most important suppliers, who account for above 70% of our supplier related total procurement spend. So we are sure, that we have already covered the major customer as well as the majority of customer spend. And further, on this basis LANXESS 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.

Impact of engagement, including measures of success

Description of measures of success :
To ensure that we continue to improve with regard to avoiding supplier-related risks and encouraging sustainability, we have set ourselves the goals:
1) We want to further increase the % total procurement spend in each year compared to the previous year.
2) We want to have a suppliers' average EcoVadis sustainability assessment above the EcoVadis benchmark of 44.7 points

Impact of climate-related supplier engagement strategy:
1) The together for Sustainability initiative have collectively between the member companies reached a total of 13,471 valid assessments, and in the year 2022, 8,385 (1,545 first assessments, 5,477 re-assessments and 1,363 other) where conducted via the EcoVadis platform. In a similar manners to Assessments, by the end of 2022 the number of valid Audit conducted at suppliers reached a pool size of 799. Therefore we were able to increase the share of % of total procurement spent from 67% in 2021 to 72% in 2022. This reduces the risk of missing large parts and therefore increases delivery reliability.

2) 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 favourable 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.
Realization of measures suggested in the Corrective Action Plan (CAP) improves the scoring.
Due to these CAPs and re-assessments the improvements of our supplier environmental engagements leads to an average EcoVadis sustainability assessment for 50.1, which is far above the EcoVadis Benchmark of 44.7 points. This also ensures that we have above-average delivery reliability.

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 our 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 background paper, where we explained our climate strategy, climate performance, our climate risk assessment and management, our ambitions regarding scope 3 emissions, etc. In 2022 we launched the Net Zero 2050 strategy for scope 3.
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. In 2022 we have created a tool that calculates the product carbon footprint for our customer. The Product Carbon Footprint Engine uses existing data from various Business Units and calculates the emissions generated using a cradle-to-gate approach. This includes greenhouse gas emissions during production, product-specific emissions related to raw materials, energy, operating materials and transport and emissions from waste disposal. The tool has been certified by TÜV Rheinland according to ISO 14067 standard for quantifying the carbon footprint of products. We are constantly developing our concepts and approaches so that we will continuously increase the proportion of products for which we carry out life cycle analysis. The Assessment and Product ISO certification in form of Life Cycle Assessment (ISO 14044) of 5 product groups is planned for this year.

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, starting discussions about climate issues and joint projects to

improve them. 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. Our customer can rate our performance and the performance of our competitors of each of these topics on a scale from 0-100.
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, as 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 topics.
The threshold for our measure of success is to be at least 3 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 climate topics (e.g. low carbon 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 climate topics, in average about 75% (68% - 85%) of our customer respondents rated our climate 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 climate topic. Since we are rated worldwide 5 percent points better as our competitors for climate topics, we bet the threshold. So the campaigns on the three levels mentioned above can be seen as a success. So we will proceed with this approach. Since the climate issue can only be seen and solved globally and we are a globally active company, we have set our goal globally. And since all our Business Units have a significant carbon footprint, as is usual in the chemical industry, we have 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

10

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

10

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment

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

Retain and engage

Climate-related requirement

Product Carbon Footprint (PCF) reductions

Description of this climate related requirement

At LANXESS we have implemented a product carbon footprint engine that allows us to determine the product carbon footprints for all of our products. In order to determine these values in a meaningful way, we depend on the product carbon footprints of our suppliers. Therefore we have implemented a process that allows us to systematically collect the respective data from our suppliers and track progress of gained transparency.
This helps us to make the most effective decisions to reduce emissions.

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

100

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

10

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment

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

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Yes, we fund organizations or individuals whose activities could influence policy, law, or regulation that may 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 external engagement activities are consistent with your climate commitments and/or climate transition plan

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,
- the purchasing department,
- investor relations,
- as well as corporate communications

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?

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.

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

Low-carbon products and services

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

Circular economy

Policy, law, or regulation geographic coverage

Global

Country/area/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 on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?

In international competition, the resulting cost of CO2 emissions will become increasingly difficult to pass on to customers via the products sold.

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.

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

Carbon pricing, taxes, and subsidies

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

Emissions trading schemes

Policy, law, or regulation geographic coverage

Regional

Country/area/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 on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?

For example the tightening of the minimum and maximum benchmarks for free allocation as well as the reducing of the overall emission cap and the phasing out of free allocation in the Emission Trading System Directive in the context of the Carbon Boarder Adjustment Mechanism is forcing LANXESS to reduce its GHG-emissions more

quickly. In international competition, the resulting cost of CO2 emissions will become increasingly difficult to pass on to customers via the products sold.

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.

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

Climate change mitigation

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

Low-carbon, non-renewable energy generation

Policy, law, or regulation geographic coverage

Regional

Country/area/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 on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?

Energy efficiency is one of the pillars to meet the climate neutral target.

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or 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 policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

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 (currency as selected in C0.4)

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 policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

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 (currency as selected in C0.4)

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 policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

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 (currency as selected in C0.4)

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 policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

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 (currency as selected in C0.4)

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 policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

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 (currency as selected in C0.4)

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 policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

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 (currency as selected in C0.4)

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 or individuals in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization or individual

University or other educational institution

State the organization or individual 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 or individual 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

2022 AR LXS_web.pdf

Page/Section reference

Governance is addressed on page 13
Strategy is addressed on pages 32, 33, 34
Risk & Opportunities are addressed on pages 137-152
Emission Figures are addressed on pages 34
Emission Targets are addressed on page 32,33

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative	Describe your organization's role within each framework, initiative and/or commitment

	framework, initiative and/or commitment	
Row 1	Science Based Targets Network (SBTN) Task Force on Climate-related Financial Disclosures (TCFD) World Business Council for Sustainable Development (WBCSD)	Describe your organization's role within each framework, initiative and/or commitment LANXESS is engaged in developing a meaningful framework for setting science based climate targets for the chemical industry. For this purpose LANXESS is a member of the SBTi Expert Advisory Group (Chemicals - Science Based Targets) which is in the process of developing a sector guidance document for the chemical industry. LANXESS is engaged in activities of the WEF coordinating different activities (TfS Carbon Footprint Calculation Methodology, SBTi Expert Advisory Group and WBCSD activities with regard to scope 3 downstream accounting) together with other chemical peers to ensure maximum buy in for those initiatives. LANXESS is member of the WBCSD. Beyond the activities in the chemical sector group, we have been engaged in developing circularity indicators and in driving circularity in the electronics and automotive industry.

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 sub-committees 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” Sub-Committee – 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 sub-committee - “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 impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?

Not assessed

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water management Education & awareness Law & policy

C15.6

(C15.6) 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	

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In mainstream financial reports	Impacts on biodiversity	Annual Report page 66: "At LANXESS, we meet the requirement of the criterion for DNSH to "protection and restoration of biodiversity and ecosystems" by way of HSE compliance checks..."

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.

All figures in this questionnaire are including the Business Unit High Performance Materials, which was reported as discontinued operations in the annual report 2022.

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)