



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

NEAR-TERM TARGET VALIDATION REPORT

LANXESS AG

6 December 2023



ABOUT THE SCIENCE BASED TARGETS INITIATIVE

The Science Based Targets initiative (SBTi) is a corporate climate action organization that enables companies and financial institutions worldwide to play their part in combating the climate crisis.

We develop standards, tools and guidance which allow companies to set greenhouse gas (GHG) emissions reductions targets in line with what is needed to keep global heating below catastrophic levels and reach net-zero by 2050 at latest.

The SBTi is incorporated as a charity, with a subsidiary which will host our target validation services. Our partners are CDP, the United Nations Global Compact, the We Mean Business Coalition, the World Resources Institute (WRI), and the World Wide Fund for Nature (WWF).

SBTi GLOBAL MOMENTUM BY THE NUMBERS



Data collected in 31/12/2022

A vertical photograph on the left side of the page shows a person standing on a grassy hill, looking out over a large body of water and distant mountains under a clear sky. The foreground is filled with golden-brown grasses.

INTRODUCTION

This report presents the results and recommendations of the submitted targets assessed against the SBTi Criteria and guidance. This includes an overview of the GHG emissions sources and inventory, target setting methodologies and ambition, emissions included in the target boundary, and company-specific feedback from the validation process, if applicable. A detailed overview of the criteria is provided in the appendix. The approved target language, which will be listed on the SBTi website and should be used in all company communications, is as follows:

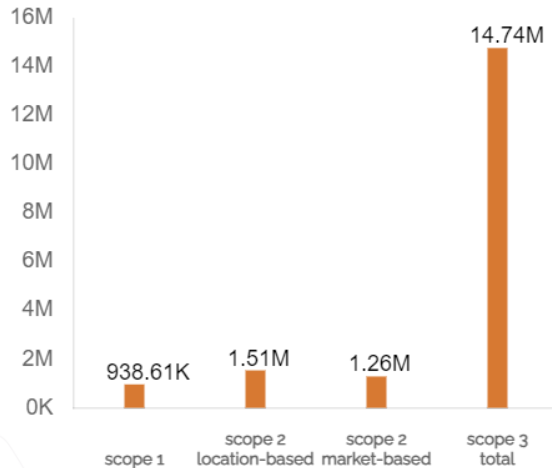
Lanxess AG commits to reduce absolute scope 1 and 2 GHG emissions 42% by 2030 from a 2021 base year. * Lanxess AG commits to reduce absolute scope 3 GHG emissions 25% within the same timeframe. *The target boundary includes biogenic land-related emissions and removals from bioenergy feedstocks.

The SBTi's Target Validation Team has classified LANXESS AG's scope 1 and 2 target ambition and has determined it is in line with 1.5C trajectory.

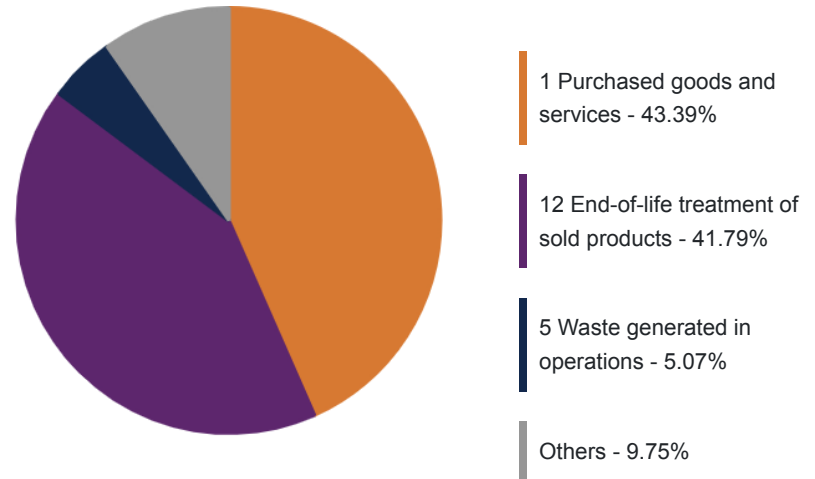
GHG INVENTORY OVERVIEW

LANXESS AG has submitted 2 GHG inventories for review by SBTi's Target Validation Team. In the calendar year of 2021 the company has reported total of 16,946,900 GHG emissions (tCO₂e) in the full minimum boundary (scopes 1, 2 and 3). In the calendar year of 2022 the company has reported total of 13,295,425 GHG emissions (tCO₂e). LANXESS AG has reported no emissions outside of minimum boundary. Additionally, LANXESS AG has reported emissions from the combustion, processing and distribution phase of bioenergy and the land use emissions and removals, associated with bioenergy feedstocks. The full breakdown of LANXESS AG's GHG inventory, including optional and biogenic CO₂ emissions, is provided below.

TOTAL GHG EMISSIONS (tCO₂e) 2021



SCOPE 3 BREAKDOWN BY CATEGORY



2021 GHG INVENTORY

		Minimum boundary emissions	Share of total emissions (location-based scope 2)	Share of total emissions (market-based scope 2)	Percentage excluded from inventory	Outside minimum boundary (optional)	Bioenergy emissions	Bioenergy removals	Biogenic total
SCOPE 1 & 2	Scope 1	938,611	5.46%	5.54%	1%	N/A	297,179	294,179	3,000.00
	Scope 2 location-based	1,513,538	8.80%	N/A	N/A	N/A	N/A	N/A	N/A
	Scope 2 market-based	1,263,511	N/A	7.46%	1%	N/A	N/A	N/A	N/A
SCOPE 3	1. Purchased goods and services	6,398,162	37.21%	37.75%	N/A	N/A	N/A	N/A	N/A
	2. Capital goods	523,538	3.04%	3.09%	N/A	N/A	N/A	N/A	N/A
	3. Fuel- and energy-related activities	391,163	2.27%	2.31%	N/A	N/A	N/A	N/A	N/A
	4. Upstream transportation and distribution	198,838	1.16%	1.17%	N/A	N/A	N/A	N/A	N/A
	5. Waste generated in operations	747,712	4.35%	4.41%	N/A	N/A	N/A	N/A	N/A
	6. Business travel	2,490	0.01%	0.01%	N/A	N/A	N/A	N/A	N/A
	7. Employee commuting	15,494	0.09%	0.09%	N/A	N/A	N/A	N/A	N/A
	8. Upstream leased assets	24,178	0.14%	0.14%	N/A	N/A	N/A	N/A	N/A
	9. Downstream transportation and distribution	282,026	1.64%	1.66%	N/A	N/A	N/A	N/A	N/A
	10. Processing of sold products	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11. Use of sold products	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12. End-of-life treatment of sold products	6,161,177	35.83%	36.36%	N/A	N/A	N/A	N/A	N/A
	13. Downstream leased assets	0	0.00%	0.00%	N/A	N/A	N/A	N/A	N/A
	14. Franchises	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15. Investments	0	0.00%	0.00%	N/A	N/A	N/A	N/A	N/A

2022 GHG INVENTORY

		Minimum boundary emissions	Share of total emissions (location-based scope 2)	Share of total emissions (market-based scope 2)	Percentage excluded from inventory	Outside minimum boundary (optional)	Biogenic emissions	Biogenic removals	Biogenic total
SCOPE 1 & 2	Scope 1	842,793	6.30%	6.34%	1.00%	N/A	300,573	297,573	3,000.00
	Scope 2 location-based	1,240,196	9.27%	N/A	N/A	N/A	N/A	N/A	N/A
	Scope 2 market-based	1,155,734	N/A	8.69%	1.00%	N/A	N/A	N/A	N/A
SCOPE 3	1. Purchased goods and services	4,917,055	36.75%	36.98%	N/A	N/A	N/A	N/A	N/A
	2. Capital goods	539,943	4.04%	4.06%	N/A	N/A	N/A	N/A	N/A
	3. Fuel- and energy-related activities	351,363	2.63%	2.64%	N/A	N/A	N/A	N/A	N/A
	4. Upstream transportation and distribution	226,592	1.69%	1.70%	N/A	N/A	N/A	N/A	N/A
	5. Waste generated in operations	610,785	4.56%	4.59%	N/A	N/A	N/A	N/A	N/A
	6. Business travel	9,264	0.07%	0.07%	N/A	N/A	N/A	N/A	N/A
	7. Employee commuting	16,947	0.13%	0.13%	N/A	N/A	N/A	N/A	N/A
	8. Upstream leased assets	26,708	0.20%	0.20%	N/A	N/A	N/A	N/A	N/A
	9. Downstream transportation and distribution	131,282	0.98%	0.99%	N/A	N/A	N/A	N/A	N/A
	10. Processing of sold products	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11. Use of sold products	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12. End-of-life treatment of sold products	4,466,959	33.39%	33.60%	N/A	N/A	N/A	N/A	N/A
	13. Downstream leased assets	0	0.00%	0.00%	N/A	N/A	N/A	N/A	N/A
	14. Franchises	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15. Investments	0	0.00%	0.00%	N/A	N/A	N/A	N/A	N/A

OVERVIEW OF NEAR-TERM SCIENCE-BASED TARGETS

LANXESS AG has submitted 2 near-term targets for review by the SBTi. All targets have been assessed against the SBTi's quantitative and qualitative criteria, along with the Criteria Assessment Indicators. For approval, a company's targets must comply with all applicable requirements. The following is an overview of the approved targets:

Target wording	Public?	Base year	Most recent year	Target year	Type	Target value	Method used
LANXESS AG commits to reduce absolute scope 1 and 2 GHG emissions 42% by 2030 from a 2021 base year.* **The target boundary includes biogenic land-related emissions and removals from bioenergy feedstocks.	Yes	2021	2022	2030	Absolute	42.0%	Absolute contraction
LANXESS AG commits to reduce absolute scope 3 GHG emissions 25% within the same timeframe.	Yes	2021	2022	2030	Absolute	25.0%	Absolute contraction

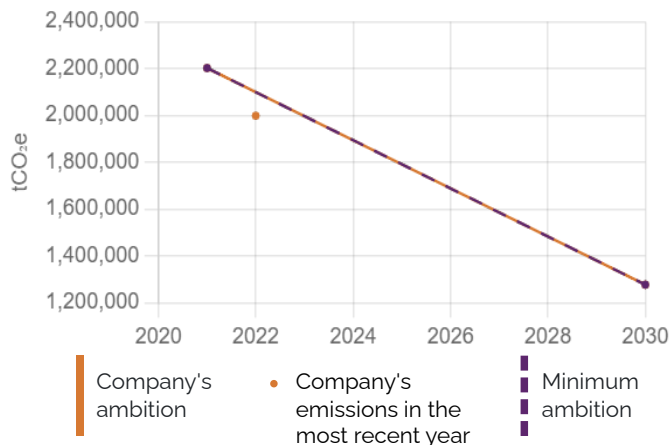
OVERVIEW OF NEAR-TERM SCIENCE-BASED TARGETS

LANXESS AG commits to reduce absolute scope 1 and 2 GHG emissions 42% by 2030 from a 2021 base year.* **The target boundary includes biogenic land-related emissions and removals from bioenergy feedstocks.

Public: Yes

Temperature classification: 1.5°C

ABSOLUTE EMISSIONS



Target Coverage

GHG Inventory breakdown	Minimum boundary emissions	Outside minimum boundary	Biogenic Total
Scope 1	100.00%	N/A	N/A
Scope 2 market-based	100.00%	N/A	N/A
Scope 3 total	N/A	N/A	N/A
1. Purchased goods and services	N/A	N/A	N/A
2. Capital goods	N/A	N/A	N/A
3. Fuel- and energy-related activities	N/A	N/A	N/A
4. Upstream transportation and distribution	N/A	N/A	N/A
5. Waste generated in operations	N/A	N/A	N/A
6. Business travel	N/A	N/A	N/A
7. Employee commuting	N/A	N/A	N/A
8. Upstream leased assets	N/A	N/A	N/A
9. Downstream transportation and distribution	N/A	N/A	N/A
10. Processing of sold products	N/A	N/A	N/A
11. Use of sold products	N/A	N/A	N/A
12. End-of-life treatment of sold products	N/A	N/A	N/A
13. Downstream leased assets	N/A	N/A	N/A
14. Franchises	N/A	N/A	N/A
15. Investments	N/A	N/A	N/A

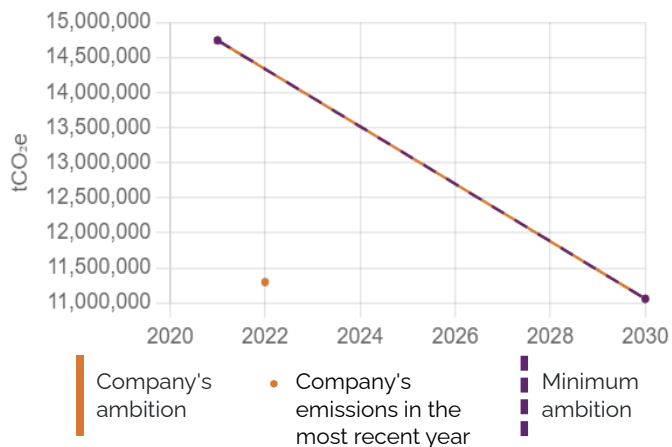
OVERVIEW OF NEAR-TERM SCIENCE-BASED TARGETS

LANXESS AG commits to reduce absolute scope 3 GHG emissions 25% within the same timeframe.

Public: Yes

Temperature classification: N/A

ABSOLUTE EMISSIONS



Target Coverage

GHG Inventory breakdown	Minimum boundary emissions	Outside minimum boundary	Biogenic Total
Scope 1	N/A	N/A	N/A
Scope 2 market-based	N/A	N/A	N/A
Scope 3 total	100.00%	N/A	N/A
1. Purchased goods and services	100.00%	N/A	N/A
2. Capital goods	100.00%	N/A	N/A
3. Fuel- and energy-related activities	100.00%	N/A	N/A
4. Upstream transportation and distribution	100.00%	N/A	N/A
5. Waste generated in operations	100.00%	N/A	N/A
6. Business travel	100.00%	N/A	N/A
7. Employee commuting	100.00%	N/A	N/A
8. Upstream leased assets	100.00%	N/A	N/A
9. Downstream transportation and distribution	100.00%	N/A	N/A
10. Processing of sold products	N/A	N/A	N/A
11. Use of sold products	N/A	N/A	N/A
12. End-of-life treatment of sold products	100.00%	N/A	N/A
13. Downstream leased assets	100.00%	N/A	N/A
14. Franchises	N/A	N/A	N/A
15. Investments	100.00%	N/A	N/A

APPENDIX

Overview of compliance with SBTi Criteria

Communication of your targets

Mandatory reporting of progress against targets

Mandatory target review and target recalculation



OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

I. GHG EMISSIONS INVENTORY AND TARGET BOUNDARY

1. Organizational boundary	Operational control was chosen by LANXESS AG as the consolidation approach, and all subsidiaries have been accounted for in the inventory boundary. Therefore, the target submission complies with Criterion 1.	Compliant
2. Greenhouse gases	All GHGs have been included in the inventory and target boundary. The target submission therefore complies with Criterion 2.	Compliant
3. Scope 1 and Scope 2	LANXESS AG has set a target covering company-wide scope 1 and 2 emissions. The target submission therefore complies with Criterion 5.	Compliant
4. Requirement to have a scope 3 target	LANXESS AG's scope 3 emissions amount to 87.01% in scope 3 base year of 2021, which is more than 40% threshold set by SBTi. LANXESS AG has set a target that covers scope 3. Therefore, the target submission complies with Criterion 4.	Compliant
5. Scope 1 and 2 significance thresholds	The proposed scope 1 and 2 target covers 99.00% of the LANXESS AG's scope 1 and 2 emissions in the base year of 2021, which is more than 95% threshold set by SBTi. And LANXESS AG has excluded 0.00% of emissions from scope 3 inventory in 2021, which is less than 5% threshold set by SBTi. The target submission therefore complies with Criterion 5.	Compliant



OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

6. Scope 3 emissions coverage for near-term targets	The proposed scope 3 target covers 100.00% of total reported and excluded scope 3 emissions, which passes SBTi threshold of two thirds of scope 3 emissions being covered by targets. Therefore submission complies with Criterion 18.	Compliant
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II. METHOD VALIDITY

7. Method validity	Targets have been assessed against the Absolute Contraction approach. The target submission therefore complies with Criterion 7.	Compliant
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III. EMISSIONS ACCOUNTING REQUIREMENTS

8. Scope 2 accounting approach	A market-based approach is used to account for scope 2 emissions and to track performance. The target submission therefore complies with Criterion 8.	Compliant
9. Scope 3 screening	A complete screening or inventory has been carried out by LANXESS AG with scope 3 GHG emissions accounting for 87.01% of the total emissions. The target submission therefore complies with Criterion 9.	Compliant
10. Bioenergy accounting	The company correctly reported CO ₂ emissions from the combustion, processing and distribution phase of bioenergy and the land use emissions and removals, associated with bioenergy feedstocks and has included them in the target boundary. Therefore, the target submission complies with Criterion 10.	Compliant
11. Carbon credits	The submitted targets do not include carbon credits. Therefore, the target submission complies with Criterion 11.	Compliant

OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

12. Avoided emissions	The submitted targets do not include avoided emissions. Therefore, the target submission complies with Criterion 12.	Compliant
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IV. TARGET FORMULATION

13. Base and target years	At least one target has not been accessed under this Criterion, as it has been approved by SBTi beforehand and has not been revisited within this validation. For the accessed targets, the target year(s) are between 5 and 10 years from the submission date. The target submission therefore complies with Criterion 13.	Compliant
14. Progress to date	The targeted reduction between the base year and the most recent year leads to emissions reductions in line with a 1.5°C pathway. The target submission therefore complies with Criterion 14. However, at least one target has not been accessed under this Criterion, as it has been approved by SBTi beforehand and has not been revisited within this validation.	Compliant

V. AMBITION

15. Level of ambition for scope 1 and 2 targets	The proposed reduction in scope 1 and 2 emissions is aligned with a rate of decarbonization consistent to keep global temperature increase to 1.5°C compared to pre-industrial temperatures. The target submission therefore complies with Criterion 15.	Compliant
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OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

16. Absolute targets	Absolute reductions are as ambitious as the minimum emissions reductions required to align with the SBTi's 1.5°C temperature pathways. The target submission therefore complies with Criterion 16.	Compliant
17. Intensity targets	No scope 1 and 2 intensity targets were submitted. Therefore, Criterion 17 is not applicable.	N/A
18. Level of ambition for scope 3 emissions reduction targets	The proposed scope 3 target meets the minimum level of ambition required. The target submission therefore complies with Criterion 18.	Compliant
19. Supplier or customer engagement targets	No supplier or customer engagement target was submitted for validation, and therefore Criterion 19 is not applicable.	N/A
20. Combined scope targets	No combined scope 1+2+3 targets were submitted, and therefore Criterion 20 is not applicable.	N/A
21. Renewable electricity	No dedicated renewable electricity targets have been submitted, and therefore Criterion 21 is not applicable.	N/A
22. Fossil fuel sales or distribution	LANXESS AG is not involved in the distribution of natural gas or other fossil fuel products, and therefore Criterion 22 is not applicable.	N/A

OVERVIEW OF COMPLIANCE WITH SBTI CRITERIA

23. Companies in the fossil fuel production business or with significant revenue from fossil fuel business lines	LANXESS AG is not involved in exploration, extraction, mining and/or production of oil, natural gas, coal or other fossil fuels, nor does the company derive 50% or more of its revenue from fossil fuels. The target submission therefore complies with Criterion 23.	Compliant
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VI. SECTOR SPECIFIC GUIDANCE

24. Requirements from sector-specific guidance	No relevant sector-specific guidance is available, and therefore criterion 24 is not applicable.	N/A
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VII. REPORTING AND RECALCULATION

25. Frequency	LANXESS AG has committed to publicly reporting its full GHG inventory and target progress annually in a disclosed location. The target submission therefore complies with Criterion 25.	Compliant
26. Mandatory target recalculation	LANXESS AG agrees to review and if necessary, recalculate and revalidate its targets following the most recent criteria at a minimum of every 5 years. LANXESS AG has set a 5% significance threshold for emission recalculations. The target submission therefore complies with Criterion 26.	Compliant
27. Target validity	LANXESS AG agrees to publicly announce its targets by June, 2024. The target submission therefore complies with criterion 27.	Compliant

COMMUNICATION OF YOUR TARGETS

Consult the [SBTi communications pack](#) for information on publicly announcing your approved target(s). The SBTi plans to publish your approved target wording and temperature alignment on [our website](#) on Thursday following 6th of January, 2024.

To request a different publication date, contact the SBTi communications team at communications@sciencebasedtargets.org as soon as possible (please note this needs to be a Thursday). The SBTi requires approved target(s) to be published within six months from the date of target validation.

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 [sciencebasedtargets.org/newsletter](#)



MANDATORY REPORTING OF PROGRESS AGAINST TARGETS

To ensure maximum transparency, accountability, and corporate leadership, LANXESS AG must publicly report the progress against any published targets on an annual basis along with your company-wide GHG emissions inventory as per criterion 25 of the [SBTi Criteria and Recommendations \(version 5.1\)](#).

When reporting progress against approved targets companies should disclose the following elements:

- Target description following the exact SBTi-aligned wording including target information such as the target type, coverage, base year and target year.
- Target progress from the target base year to the reporting year in terms of emissions reductions, share of renewable electricity, or supplier/ customer engagement (annual breakdowns are preferable). Variability between years is expected, so it is important to show trends over multiple years.
- Details on substantial emissions variations and targets reviews following the SBTi criteria about mandatory target review and target recalculation criteria.
- Actions towards meeting the target, including information on emission reduction projects in implementation and planning phase that will contribute to the achievement of their targets.
- Full GHG emissions inventory in accordance with the GHG Protocol Corporate Standard. Companies must report all emissions scopes (1, 2 and 3) and all scope 3 categories, including those that do not fall within a target boundary.

Please consult [the Procedure for Validation of SBTi Targets](#) for more guidance.



MANDATORY TARGET REVIEW AND TARGET RECALCULATION

The IPCC special report on 1.5C highlighted the necessity to halve emissions by 2030 and to reach net-zero emissions by mid-century. Your science-based targets are a key element of your decarbonization trajectory while maximizing transparency and accountability.

In line with the SBTi Criteria, your company must review its targets against the latest criteria and guidance within five years, and if necessary, recalculate and revalidate for continued recognition by the SBTi.

The following changes should trigger a target recalculation:

- Scope 3 emissions become 40% or more of aggregated scope 1, 2 and 3 emissions.
- Emissions of exclusions in the inventory or target boundary change significantly.
- Significant changes in company structure and activities (e.g. acquisitions, divestitures, mergers, insourcing or outsourcing, shifts in goods or service offerings).
- Significant adjustments to the base year inventory or changes in data to set targets such as growth projections (e.g. discovery of significant errors or a number of cumulative errors that are collectively significant).
- Other significant changes to projections/assumptions used in setting the science-based targets.

Please consult Criterion 26 and Recommendation 11 of the [SBTi Criteria and Recommendations \(version 5.1\)](#), and [the Procedure for Validation of SBTi Targets](#) for further guidance.



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