Welcome to your CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

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

Lundbeck is a global pharmaceutical company highly committed to improving the quality of life of people living with brain diseases. For this purpose, Lundbeck is engaged in the research, development, manufacturing, marketing and sale of pharmaceuticals across the world. The company's products are targeted at the disease areas within psychiatry and neurology.

Focus on R&D is the most important pillar in Lundbeck's ambition to improve treatment for people living with brain diseases. We are specialists in our area and have a state-of-the-art research facility in Denmark.

We cooperate closely with strategic partners all over the world, ensuring the best possible foundation for innovation and the development of new treatment solutions.

Lundbeck employs approximately 5,300 people worldwide. We have employees in more than 50 countries, and our products are registered in more than 100 countries. We have production facilities in Denmark, France and Italy and our research centers are based in Denmark, Italy and USA. Lundbeck generated revenue of DKK 16.3 billion in 2021.

In early 2020, Lundbeck launched a new sustainability strategy. The sustainability strategy aims to ensure that our business activities are conducted in a way that supports seven Sustainable Development Goals (SDGs) and mitigates significant risks and adverse impacts.

Goal 3 Good Health and Well-being is closely linked to our corporate purpose and dedication to restore brain health, so every person can be their best. Goal 13 Climate Action will drive our efforts to prepare for a zero emissions future. And then we will use our influence and act to promote Goals 5, 8, 10, 12 and 16.

Climate strategy: In 2007 Lundbeck developed our first Climate strategy, making a firm commitment to minimizing CO2 emissions, and confirming our ambition to be among the leaders within the pharmaceutical industry. By the end of 2019 we decided to accelerate our actions and joined the global movement “Business Ambition for 1.5°C” of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement. By doing so we committed to carbon neutrality no later than 2050. In 2020 we developed a new Science based target that was approved according to the 1,5C scenario and announced in the beginning of 2021. This target includes a reduction of carbon emissions from production and fleet drastically by almost two-thirds over the next 15 years and reduce our carbon footprint outside our premises by nearly a fifth over the next 15 years. Production and fleet take up app. 20% of our entire footprint and our scope 3 target include app. 2/3 of our scope 3 emissions in the categories: Purchased goods and services, Upstream transportation and distribution and Business travel. With our new, ambitious climate target, our Executive Management team will expand the work we do across our value chain, in collaboration with all our partners and suppliers and we will ramp up our employee engagement on climate action. Next step is to develop a Low carbon transition plan that show our way to net zero emissions.

C0.2

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

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

C0.3

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

Denmark
France
Italy
Poland
United States of America

C0.4

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

DKK

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

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	DK0010287234

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain

Other C-Suite Officer	The Board of Directors consist of 7 external members and 4 elected Lundbeck group representatives. The C-Suite Officer is our Executive Vice President of Product Development & Supply. The Executive Vice President of Product Development & Supply (C-suite officer) is member of the Executive Management (EM) and attend Board meetings. EM reports regularly to the Board of Directors. Our Executive Vice President of Product Development & Supply (C-suite officer) is appointed by the Chief Executive Officer (CEO) to have the corporate responsibility on climate issues and to chair The Health, Safety and Environmental (HSE) Council and to chair the Steering committee for Climate change. The HSE Council has the highest level of responsibility for climate change and approve our climate targets and strategy. The Steering committee for climate change has the responsibility for overseeing progress against targets and initiatives within climate change and take necessary decisions to achieve the targets, like governance structure for climate initiatives, supplier engagement model and proposal for Low Carbon transition plan. The Executive Vice President of Product Development & Supply (C-suite officer) has direct access to present major climate related decisions to both the Board and EM. Examples on decisions that has been taken by the Executive Vice President of Product Development & Supply (C-suite officer) and presented for first the CEO and EM and following the board is our decision about joining the global movement “Business Ambition for 1.5°C” (Dec 2019) and in 2020 our 1,5C aligned Science Based Target that was announced in the beginning of 2021. In 2021 the Steering committee for climate change decided to: - Include relevant climate tasks in key managers and employees performance targets (performance targets are used for deciding monetary bonus) - Initiate development of a Low carbon transition plan. The Low carbon transition plan will get the first approval by the Steering committee in September 2022 and the final approval by EM ultimo 2022 and following presented for the board.
President	The Director of the Corp. Health Safety and Environmental (HSE) department (President level in the organization) was elected as member of the Board in March 2022. The Director of HSE is also member of the Steering committee for climate change. The Steering committee for climate change has the responsibility for overseeing progress against targets and initiatives within climate change and take necessary decisions to achieve the targets, like governance structure for climate initiatives, supplier engagement model and proposal for Low Carbon transition plan. In 2021 the Steering committee for climate change decided to: - Include relevant climate tasks in key managers and employees performance targets (performance targets are used for deciding monetary bonus) - Initiate development of a Low carbon transition plan. The Low carbon transition plan will get the first approval by the Steering committee in September 2022 and the final approval by EM ultimo 2022 and following presented for the board.

	Additionally the Director of Corp. HSE is the direct manager of the Project manager of the Cooperate climate strategy and project and via this responsible for the corporate climate strategy and all external climate reporting like the quarterly release that include status on our climate scope 1 and 2 target and questionnaires like CDP. As part of preparing the CDP response the Director of Corp. HSE participate in the evaluation of climate related risks and opportunities that are reported in CDP.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures	The CEO has the highest responsibility of the sustainability strategy and present major decisions to the board when relevant. In 2020 we launched our updated Sustainability Strategy including our Sustainable Development Goals and we are determined to integrate sustainability as a strategic imperative. This is for instance expressed in the acceleration of our Climate Strategy. In Dec 2019 we joined the "Business Ambition for 1.5°C" of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement and in the beginning of 2021 we announced our new approved Science Based Target. These are examples on major decisions that have been presented for the Board. Next major decision that will be presented for the Board is our Low Carbon transition plan that is expected to be approved by the CEO and the Executive Management group ultimo 2022 and following presented for the board. Additionally, we include status on our climate targets in our quarterly financial release. These announcements are carefully reviewed at Board meetings. The Executive Vice President of Product Development & Supply (C-suite officer) is responsible for these input at the Board meetings. The CEO has appointed the Executive Vice President of Product Development & Supply (PDS) to have the highest responsibility on the climate strategy, climate performance and management and to chair the HSE Council,

	Monitoring and overseeing progress against goals and targets for addressing climate-related issues	which is the committee with the highest responsibility on climate performance and management. The executive vice president of PDS is also chairing the Steering committee for climate change that is responsibility for overseeing progress against targets and initiatives within the climate strategy and take necessary decisions to achieve the targets. This means the Executive Vice President of PDS has the overall responsibility of defining and evaluating corporate policies, strategies, guidelines and corporate activities and monitoring progress against targets within climate change and to report major decisions to the Board. The HSE Council have 1 meeting every quarter of the year, where status on climate targets and objectives are reviewed and discussed. The Steering Committee for climate change has 3 meetings during the year where detailed progress on targets and initiatives are reviewed and discussed and new initiatives decided.

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	The Board of Directors consist of 7 external members and 4 elected Lundbeck group representatives. Our Executive Vice President of Product Development & Supply (C-suite officer) is member of the Executive Management (EM) and attend Board meetings. The Executive Vice President of Product Development and Supply (PDS) has been appointed by the Executive Vice President to have the highest responsibility on the climate strategy, climate performance and management and to chair the HSE Council, which is the committee with the highest responsibility on climate performance and management and to chair the Steering committee for climate change. The Steering committee for climate change has the responsibility for overseeing progress against targets and initiatives within climate change and take necessary decisions to achieve the targets, like governance structure for climate initiatives, supplier engagement model and proposal for Low Carbon transition plan. . Due to these positions the Executive Vice President for PDS is regularly being trained and updated within all company related aspects of climate action and has competences within e.g.:

		- Climate strategy and targets - Scope 1, 2 and 3 initiatives to achieve targets - Requirements within Science based targets and transition planning - Risk management and mitigation of risks - Business strategy Additionally the Executive Vice President for PDS is audited annually by a third party within his areas of responsibility as a part of the regular ISO 14001 audit. In March 2022 the climate competences on the board was strengthened further because the Director of the Corp. Health Safety and Environmental (HSE) department (President level in the organization) was elected as member of the Board. The Director of HSE is also member of the Steering committee for climate change. Additionally the Director of Corp. HSE is the direct manager of the Project manager of the Cooperate climate strategy and via this involved on a daily basis in all decisions within the corporate climate strategy. The Director of Corp. HSE has competences within e.g.: - Climate strategy and targets - Scope 1, 2 and 3 initiatives to achieve targets - Requirements within Science based targets and transition planning - Risk identification - Climate reporting e.g. CDP

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify The C-Suite Officer is our Executive Vice President of Product Development & Supply. Member of Executive Management and attend Board meetings.	Both assessing and managing climate-related risks and opportunities	Quarterly
Chief Executive Officer (CEO)	Assessing climate-related risks and opportunities	Quarterly

Environment/ Sustainability manager	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify SVP Pharmaceutical Production & Supply C·Pharmaceutical Production & Supply Chain is approver of the Business Impact Analysis Report	Both assessing and managing climate-related risks and opportunities	Annually

C1.2a

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

Our **CEO** is heading the Executive Management and has the overall responsibility of the Sustainability strategy where our climate ambition is included. 4 times a year the Executive Management regularly assesses status on the sustainability strategy including our climate targets. Risks and related mitigating actions and opportunities are also assessed regularly by the Executive Management and reviewed together with the Board of Directors.
Our CEO has appointed our **C-Suite Officer, the Executive Vice President (EVP) of Global Product Development & Supply (PDS)** to have the highest responsibility on climate related issues (Ambition, targets, performance and reporting of risks and opportunities). The EVP of PDS:
- Is member of the Executive management and responsible for presenting significant decisions within climate change like joining the “Business Ambition for 1.5°C” and our Science Based Target.
- Participate at Board meetings and is responsible for presenting significant decisions within climate change like joining the “Business Ambition for 1.5°C” and our Science Based Target.
- Has the overall responsibility for all production and facility management and the overall responsibility for Lundbeck's energy costs.
- Is chairing the Steering committee for climate change that is responsibility for overseeing progress against targets and initiatives within the climate strategy and take necessary decisions to achieve the targets.
- Is reporting in the Corporate risk register
- Is responsible for reporting in the quarterly Corporate release about status on climate targets and other substantive status and decisions related to our climate ambition and target. The quarterly Corporate release is presented and evaluated at the Board meetings.
- Is appointed by the CEO to be chairman for Lundbeck's Health, Safety and Environment (HSE) Council that acts on behalf of the Executive Management in respect to all HSE matters including climate change. The role of the HSE Council is to:

- Define and evaluate corporate HSE policies, strategies, guidelines and corporate activities and targets concerning HSE aspects including climate targets.
- Evaluate Lundbeck's HSE performance quarterly and annually including status on our climate targets.
- Communicate corporate decisions to managers and employees at all sites.

The Director of the Corp. Health Safety and Environmental (HSE) department (President level in the organization) is responsible for driving and developing all the corporate climate activities including the Corporate Climate strategy and project and our response to CDP. The Director of HSE is member of the Steering committee for climate change and the HSE Council and have access to present significant decisions for both the steering committee for climate change and the HSE Council. The Director of Corp. HSE participate in the evaluation of climate related risks and opportunities that are reported in CDP and is responsible for getting significant climate related risks reported in the corporate risk register.

SVP for Pharmaceutical Production & Supply Chain is responsible for preparation of the annual Business Impact Analysis. The Business Impact Analysis report present business interruption impact and mitigation of risks securing a resilient supply chain. It includes risk for interruption of key processes and risk for loss of key assets including climate related physical risks. The reason for this responsibility is that the SVP for Pharmaceutical Production & Supply Chain:
- Has the responsibility for Lundbeck's Supply chain and avoidance of risks related to business interruptions in the supply chain.
- Is reporting to the Executive Vice President of Global PDS (C-suite officer), the audit committee and the board once a year about the results from the Business Impact Analysis.
- Is reporting regularly when changes in the risk picture arise at least twice a year in the corporate risk register.

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	All employees and managers in Lundbeck are covered by a Performance Management System. Through this system individual goals, including climate related goals can be set. Especially managers and employees that are a part of

		development and achievement of our climate target and ambition can have individual climate or energy goals. Twice a year managers and employees participate in performance dialogues and once a year the performance is evaluated and scored, and good performance is recognized through the scoring system. The score is used as to decide the size of an annual bonus and general salary adjustments.

C1.3a

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Other C-Suite Officer	Monetary reward	Emissions reduction project Emissions reduction target	In our Performance Management System all managers and employees have individual goals, including climate related goals. Once a year the performance is evaluated and scored, and the score is determining the size of the bonus. The Executive Vice President of Product Development & Supply (C-Suite Officer, member of Executive Management and appointed to attend board meetings) has the corporate responsibility for our climate strategy and targets and have progress against our Science based target (63% reduction of scope 1, 2 and 19% reduction of 2/3 of scope 3 from 2019 to 2034) as part of his bonus goals. This means that Lundbeck's progress towards our climate targets and the corporate climate project is influencing the size of the bonus for our Executive Vice President of Product Development & Supply. In 2022 we have also prepared an annual target for scope 1 and 2 emissions on 3% reduction compared to 2021.
Corporate executive team	Monetary reward	Emissions reduction project Emissions reduction target Supply chain engagement	All EVP's (members of executive management) has a climate related target as part of their bonus goals phrased like this: In continuation of meeting Lundbeck's science-based climate target, all EM members are held accountable for one impactful initiative to significantly reduce Lundbeck's Scope 3 emissions. Depending on the business area they are representing the precise wording of the target reflects how they can impact the scope 3

			emissions. The initiative has a clear link to a part of all EVP's members variable cash remuneration.
Facilities manager	Monetary reward	Energy reduction target	There is an annual bonus for meeting short term targets related to energy reduction targets that affect scope 1 and 2 emissions. All sites are defining a site-specific energy target. The size of the bonus is managed in our Performance Management System. In the Performance Management System all managers and employees have individual goals, including climate related goals. Once a year the performance is evaluated and scored, and the score is determining the size of the bonus.
Procurement manager	Monetary reward	Emissions reduction project Environmental criteria included in purchases Supply chain engagement	Like all managers with key responsibility within the climate project the procurement manager has following target as part of the bonus goals: - Develop and execute a 2022 plan with impactful initiatives to significantly reduce CO2 emissions (Scope 1, 2 and 3) by end of 2021. - Appoint resources to implement initiatives in the plan for 2022. - Develop a 3 year plan (2023 – 2025) with impactful initiatives to significantly reduce CO2 emissions (Scope 1, 2 and 3) by end August 2022. Additionally all Category managers have climate related targets in their bonus goals like: - Develop and promote a climate conscious travel policy - Investigate possibilities for preparing a Power Purchase Agreement for the European sites - Engage with suppliers about climate action
Environmental, health, and safety manager	Monetary reward	Emissions reduction project Company performance against a climate-related sustainability index	The Environmental/Sustainability managers and specialists are rewarded monetary if they complete activities that supports achievement and development of our climate strategy and targets. E.g. development of a proposal for a Low carbon transition plan in 2022 and the scoring result of CDP are included to trigger bonus. The size of the bonus is managed in our Performance Management System where Environmental/Sustainability managers and specialists have individual climate related goals. Once a year the performance is evaluated and scored, and the score is determining the size of the bonus.

Other, please specify App 250 employees in Facilities and HSE	Monetary reward	Efficiency project Supply chain engagement	Every year an implemented initiative is rewarded by a monetary gift. The initiative must support Lundbecks Business principles. Energy reducing activities supports many of these Business principles and can therefore also be rewarded. In 2021 a supplier workbook tool to gather CO2 emission data from suppliers was rewarded.
Other, please specify App 250 employees in Supply Chain & Facility Management	Non-monetary reward	Efficiency project Behavior change related indicator	Every month an implemented initiative is rewarded and communicated to all employees in Facility and HSE. The initiative must support Lundbecks Business principles including Lundbecks climate ambition. Energy reducing activities and improvements of Lundbeck carbon footprint are examples on initiatives that have been rewarded.
All employees	Non-monetary reward	Emissions reduction project Energy reduction project Behavior change related indicator	An annual HSE award, including a gift, is given to a good HSE initiative. Energy reducing initiatives can be chosen as well as other HSE initiatives. The area that win the prize get a trophy and a gift. In 2021 an initiative with improvement of waste management and saving 2.868 kg CO2 emission/year was nominated among 3 other initiatives.

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	2	The local business plans for the individual business units uses typically 1 - 2 year for short-term planning and definition of annual goals. Since 2006 we have also had annual climate targets.
Medium-term	2	10	Lundbeck do not use the term “medium” in our financial planning, but only long-term financial business planning when looking 2 - 10 years ahead. Due to the long perspective for climate risks and the existence of climate scenarios, we are using both medium and long-term horizons in our climate strategy and identification of risks and opportunities. For the climate targets our medium horizon runs from 2 - 10 years which corresponds to our Science based target running for 15 years from 2019 - 2034.
Long-term	10	30	Our long-term horizon for our climate strategy and identification of risks and opportunities runs from 10 - 30 years. This is reflected in our long-term Net Zero target running from 2019 - 2050.

C2.1b

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

All risks that are reported in the risk register is considered substantive, but in order to decide how substantive a risk may be, Lundbeck consider both the financial and strategic impact and the probability of the risk. Risks on both company and asset level are assessed.

The financial and strategic impact range is divided in:

- Minor: Small losses less than 500 MDKK
- Moderate: Moderate damage on reputation, some financial loss between 500 MDKK and 2,500 MDKK
- Major: Major damage to reputation, major financial loss between 2,500 and 5,000 MDKK
- Catastrophic: Significant damage to reputation, huge financial loss, more than 5,000 MDKK

The probability range is divided in:

- Unlikely: No past history, but possible in some circumstances or occasionally
- Possible: Some past history, and considered possible in some circumstances
- Likely: Some past history, and considered quite likely in these circumstances
- Almost certain: The event will occur in most circumstances.

By combining the individual risks financial and strategic impact and the probability the final risk is determined as:

Low: Can be managed through routine procedures

Medium (yellow): Can be managed by specific monitoring or risk treatment

Medium (orange): Requires attention from Executive Management (EM)

High: Requires detailed research, EM planning and Board of Directors involvement.

Our identified risks related to business interruptions which could be caused by wildfire at one of our own sites and flooding at our warehouse supplier are both assessed to have Moderate financial and strategic impact and be Unlikely. This result in a final: Medium - Low risk.

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

RISKS on both company and asset level, covering both direct operations and our upstream and downstream operations in our value chain, are identified and managed in a common risk management system. Our risk management principle is that risks, in addition to central monitoring and coordination, must be managed by decentralized business units as they have the most extensive knowledge of the risks and the best possibility of mitigating the exposure. The individual business units take a systematic approach to monitor, identify, quantify and respond to risks.

Furthermore, we have defined reporting, decision-making and follow-up procedures. The decentralized risk assessment in the business units is done continuously and at least once a year reported into the corporate risk register providing a consolidated picture of our risk exposure on short-, medium- and long-term. The risk descriptions give details of the event; category, type, current status, status of response, likelihood and potential impact and the person responsible for managing the risk. A very important input in our company wide risk management system is our annually updated Business Impact Analysis (BIA) Report that consider physical climate related risks. The BIA report is the result of a process that integrates insurance inspections, risk management workshops, risk-mitigating actions, supply continuity planning and supply chain management in one uniform process, considering risks at both company (incl. suppliers and partners) and asset level. The primary focus of the report is to identify business interruption impact and mitigation of risks securing a resilient supply chain on both short, medium and long-term time horizon . Based on the identified risks our Business insurance premium is decided. The main results from the BIA report is presented for the Executive Management once a year and included in our risk register. The risk register is processed by the risk management organization and evaluated by our central Risk Office. The Risk Office assesses the overall risk exposure and discusses it with the Executive Management. Finally, a key risk overview is reviewed by our audit committee and shared with the Board of Directors.

The principal aim of the risk management system is to strike the balance between risk exposure and value creation. Materiality of the risks is determined by combining the individual risks probability and impact. RISKS are assessed both as gross risks and net risks. The assessment of gross risk assumes that no mitigating actions have been implemented, whereas net risk assessment consider implemented mitigating actions and their anticipated effect. Lundbeck strives to have as many risks mitigated as possible.

Identification and reporting of PHYSICAL RISKS:
Two of the most substantive risks in 2021, which were identified in our Business Impact Analysis that are evaluating risk on the short- and medium time horizon, is a wildfire at our pharmaceutical site in France (Cote D'azur region) that are likely to happen on short-term (0-2 years) and river flooding at our Warehouse provider in Tennessee, USA, that are likely to happen on medium term (3-10 year). To mitigate the risk from a wildfire at our French site a Fire gap analysis have been prepared by our insurance broker in 2021. The gap analysis identify the weaknesses on the site and suggest preventive actions. To mitigate the risks at our suppliers, our most critical suppliers prepare Factory Assessment Reports and undergo an extended evaluation including with audits. Additionally, we establish dual sourcing when possible e.g. we have implemented dual-warehousing in Nevada to secure continued supply in the event of an incident at our Warehouse provider in Tennessee.

Identification and reporting of TRANSITIONAL RISKS:
Transitional risks like reputational or regulatory risks and opportunities at both company and asset level are mainly assessed by the Corporate Health, Safety and Environment (HSE) department and the Compliance & Sustainability department. E.g. are current and emerging legislation

(Looking 1 - 3 years ahead) assessed quarterly and social/reputational trends (Looking 1- 10 years ahead) are evaluated at least once a year. The Director of the HSE department reports quarterly to the HSE Council that decide if actions are needed. If considered significant the Chairman of the HSE Council reports to the Executive Management group and into the risk management system at least semi-annually. A substantive identified transitional risk is the possibility of increased energy prices and CO2 pricing e.g. in Denmark the government are currently working on introducing a new carbon tax. This development corresponds with the predictions in scenario IEA450 where CO2 pricing is predicted to increase in all OECD countries. This risk is identified by the Corporate HSE department and reported in our risk register. To reduce the impact of increasing CO2 pricing we have worked dedicated with energy optimization at our sites and our possibilities for increasing our use of renewable electricity, e.g. we entered a Power Purchase Agreement in 2020 which will supply our two Danish sites with renewable electricity from January 2022. Similar possibilities for our European sites and our sites in USA is currently being explored. Another substantive identified risk is the upcoming sustainability reporting requirements (CSRD), that will impact both our environmental and climate related performance and disclosure significantly. A gap analysis have been prepared and during 2022 initiatives will be prioritized and planned.

OPPORTUNITIES are identified and managed by the decentralized business units as they have the most extensive knowledge. Evaluation of opportunities is assessed continuously several times a year and decisions and prioritization are taken in the units e.g. most energy reducing activities are identified and implemented in the business units.
Strategic opportunities are reported up in the line organization following defined procedures for decision making and decided based on the priorities in our business strategy. In the recent years we have experienced that financial institutions are favoring companies with high ratings in ESG indexes by offering cheaper loans. To exploit this opportunity we have increased our participation in those ESG indexes, that banks and investors most often use. Apart from CDP we are reporting to following ESG indexes in 2021: Sustainalytics, MSCi, Moody's, ISS ESG, FTE Russel and Nasdaq Nordics. During 2020 an opportunity for sustainability linked loans revealed and during 2021 we agreed with top management and the bank on 3 sustainability KPI's (two of them relating to climate performance) and expect to sign the loan in June 2022. We believe that our focus on increasing our climate ambitions e.g. by signing the “Business Ambition for 1.5°C” pledge will improve our possibilities for realizing such opportunities.

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	All environmental and climate related regulations are followed quarterly by the Corporate HSE department. E.g. regulations concerning energy and carbon taxes are always considered since this influences our revenue. At the moment, our total energy costs constitute a very small part of our revenue (0.3%), so the risk related to increasing prices and taxes is currently considered low even though climate scenarios like IEA NZE predict increasing carbon pricing. In DK where our headquarter and one of our chemical sites is located we are currently experiencing a new carbon tax that increase the financial impact related to energy costs. Another example is our implementation of the directive on energy efficiency (Directive 2012/27/EU) on all our European sites. The Energy Directive has negligible financial impact on our business. Other environmental regulations like the requirements about best available technologies (BAT) are currently affecting our operational costs in Denmark, because we have to implement a new exhaust air treatment system (RTO) at our chemical site. This is an investment on app. 20 MDKK that has been discussed on the management boards in the line organization, included in the budget process and approved by our Executive Vice President of Product Development & Supply (C-Suite Officer, member of Executive Management group and attend Board meetings) and our CFO. The system was established in 2020 and are being tested and up running during 2021. Other regulations and requirements related to pharmaceutical products can also have an effect on our climate footprint. E.g. regulation for humidity and temperature during production and transportation are likely to increase the energy consumption to maintain the required conditions. These regulations are followed regularly in the local business units and the business risk evaluated and if relevant included in the budget process and the business planning.
Emerging regulation	Relevant, always included	All emerging regulation concerning environmental and climate related issues is followed quarterly by the Corporate HSE department. At least once a year, in connection with the update of the Corporate HSE strategy, risks and opportunities related to emerging regulation are considered in the HSE Council. This is followed by plans for preparing and implementing new requirements in the organization. Energy and carbon pricing, energy efficiency and reporting requirements are examples on typical climate related areas that are risk assessed. An emerging regulation that will affect our business is the extended producer responsibility on packaging waste introduced via The European Commission, 2020 Circular Economy Action Plan. This legislation will encourage to redesign our packaging materials to favor recycled and recyclable materials to support a more circular economy. The regulation is still to be determined in more detail, both the scope and the national implementation before the impact on our operational costs can be estimated.

		Regulation related to climate reporting is also developing at the moment. The European sustainability reporting standards (CSRD) is applicable to all large companies incl. Lundbeck. This will increase the performance and reporting burden and costs related to implementation of new initiatives and assurance of sustainability data. As we already complying with many of the performance and disclosure requirements within climate, the increased cost related to climate is considered to be low, but for other sustainability areas like pollution and water we are currently evaluating the impact of this new legislation. Other regulations and requirements related to pharmaceutical products can also influence our climate footprint. E.g. regulation for humidity and temperature during production and transportation are likely to increase the energy consumption to maintain the required conditions. These regulations are also followed continuously in the relevant local business units and the business risk evaluated. A recent example is the new tightened requirements to fixed temperature during transportation. The effect of this regulation is an increase in transportation cost on app. 50% because we will have to favor trucks with cooling systems on several product transports hence increasing energy consumption for transportation.
Technology	Not relevant, included	Lundbeck do not develop new climate related technologies. Therefore, our interest in technology lies in the opportunities for optimizing the energy consumption related to our production or other possibilities for optimization of production efficiency at our sites. This could be technologies that enables us to recycle more solvents or use less solvents in a process or technology that make it possible to convert from fossil fuels to electricity. All technologies that can contribute to reduced CO2 emissions, reduction of our energy or raw material consumption present an opportunity for the company to reduce our risk related to limited supply of biofuels, increasing prices on energy/CO2 and raw materials. Additionally, it presents an opportunity to make progress against our climate targets. The development in technologies that we are using are therefore followed regularly and opportunities included in the future business planning. E.g. we are using a part of our solvent waste as fuel in our new exhaust air treatment system (RTO), that was installed during 2020 at our chemical site in Denmark. By using solvent waste we avoid using gasoil as fuel. In 2021 we have investigated our possibilities for installing a new equipment for increased solvent recycling. Unfortunately with no success so far, but other recycling possibilities will be explored during 2022. Apart from these initiative we always prioritize to choose more energy efficient equipment, when we are renewing old equipment like pumps.
Legal	Not relevant, included	Our legal department monitors relevant litigation claims, but we do not believe this is a material risk for Lundbeck and to date, no such claims have been raised. One of our business principles is to be responsible. It is therefore a high priority to be in compliance with all legislation and act responsibly.

		To strengthen our work with compliance we always cooperate with the European Foundation of Pharmaceutical Industries Association (EFPIA), to identify risks related to emerging regulations in order to influence the regulation and to contribute to the preparation of Position papers for the pharmaceutical industry. An example on a Position paper for EFPIA members, where we actively have contributed, is the Position paper on Climate where EFPIA encourage members to develop Science based targets in line with the Paris Agreement. In November 2019, the Danish Prime Minister, Mette Frederiksen unveiled 13 climate partnerships covering the main sectors across Danish industry, including sectors such as Maritime, Transportation, Energy, Agriculture, Packaging, Production and Life science & Biotech. Lundbeck participated in the Life science & Biotech partnership where we prepared recommendations for the government to aid the government in reaching the ambition of reducing CO2-emissions by 70% in 2030 and in 2021 the partnership prepared sector roadmaps with business objectives and recommendations to the government. Since 2006 we have worked actively to reduce our environmental impacts and are today committed to support the Paris Agreement and have joined the “Business Ambition for 1.5°C” of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement. In the beginning of 2021 we could announce our new Science Based Climate Target approved by SBTi. These commitments clear express our support to the Sustainable Development Goal 13, Climate Action. Therefore we do not believe climate-related litigation claims are a risk to Lundbeck.
Market	Relevant, sometimes included	During the next 10 years we do not expect shifts in demand for our products due to climate change. We only make medicines for disease areas within psychiatry and neurology, and we do not assume that these disease areas are impacted by climate changes. But we do see a possible trend towards national organizations that source medicine for hospitals e.g. Amgros in Denmark and NHS in UK, include environmental considerations in their sourcing strategy. In Denmark Amgros have in 2021 initiated a process with the purpose of developing environmental considerations in their sourcing strategy. As this process has just started, the impact on our business is unknown. Similar has NHS developed a supplier framework including increasing requirements for reporting and target ambitions in the years 2022 - 2045. Since we continuously are increasing our ambitions within climate action, we do not expect this to impact our business, but we will follow the process closely and include it in our risk register if it becomes significant. We do not expect changes in our supply needs. Our products are mainly based on chemicals and chemical synthesis and a very small part is based on proteins. Neither of these raw materials are dependent on biological raw materials, that could be affected by climate changes. Therefore, market risks related to climate change are not included in Lundbeck's overall risk register yet.

Reputation	Relevant, always included	Our reputation concerning all sustainability issues are of great importance for the organization. We are experiencing that good ESG rating have a positive financial impact on financing/funding for Lundbeck on two overall categories (1) Regular bank loans and (2) Corporate bonds. This means that if we do not have good climate performance, we cannot obtain these favorable loans. In addition, bad climate performance can influence and reduce our ability to attract the right employees. The upcoming European sustainability reporting standards (CSRD) may impact our reputation depending on the degree of our compliance. We have currently received a gap analysis from our assurance consultant and based on that we will prioritize and plan how to comply with this legislation during 2022. We have also considered if there could be a reputational risk related to customers and stakeholder's belief and thinking of Lundbeck's Climate change performance. We have not yet found any significant risks related to this, but due to the increased focus on climate changes we cannot exclude this risk in the future. To meet risks and exploit opportunities related to our reputation we are continuously developing our climate strategy and increasing our ambitions. In 2019 we joined the “Business Ambition for 1.5°C” of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement and primo 2021 we announced our new Science based target approved (1.5°C) by SBTi. We also include a TCFD reference index as part of our Sustainability reporting and ultimo 2021 we initiated the preparation of a Low carbon transition that we expect to publish in 2023. Reputational risks related to climate issues are always included in our climate related risk assessment. The risks are typically identified by the Compliance & Sustainability department and the Corporate HSE department and reported and evaluated with relevant managers in the line organization. Key managers are our Senior Vice President for Supply chain and facility management, our Chief Compliance Officer, our Vice President for investor relations and our Executive Vice President of Product Development & Supply (C-Suite Officer, member of Executive Management group and attend Board meetings) that has the corporate responsibility for climate issues. The result of the evaluation determines if the risk must be reported in our risk register.
Acute physical	Relevant, always included	Acute physical risks like flooding due to extreme weather events and wildfire due to increasing temperature both resulting in loss of production capacity are relevant for both our own sites and certain groups of our suppliers and are always included in our risk assessment and our risk register. Every year a Business Impact Analysis report is prepared. The focus of this report is business interruption impact and mitigation of risks securing a resilient supply chain. As a result of this

		annual assessment we continuously strengthen our mitigating actions like having dual sourcing and increase of back up production possibilities. An example on a risk is flooding at our warehouse service provider in Tennessee, USA situated in a high-risk area for river flooding. This risk is considered to have substantial impact on our business and is ranked medium in our risk system. To minimize this risk Lundbeck have implemented dual warehousing in Nevada to secure continued supply. Another example is the risk for wildfire at our pharmaceutical site in France (Cote D'azur region). A fire gap analysis prepared by a third party in 2021 shows that a wildfire is likely to happen and that existing sprinklers and fire alarms will not be able to limit the damage of a massive roof fire and well trained personnel will not be able to do anything significant to inhibit the fire until the local fire brigade arrives at the site. Additionally, it is evaluated that the fire brigade will have insufficient time to setup the right measures to carry out their firefighting of the roof/building complex until it is to late. The recommendations in this gap analysis will create basis for decisions about further fire protection initiatives at the site during the upcoming years. The risk is reported in our Business impact analysis report whish is presented for the Executive Management once a year and included in our risk register. The risk register is processed by the risk management organization and evaluated by our central Risk Office. The Risk Office assesses the overall risk exposure and discusses it with the Executive Management.
Chronic physical	Relevant, always included	Our products are mainly based on chemicals and chemical synthesis and only a very small part is based on proteins. Neither of these raw materials are dependent on biological raw materials, and therefore not directly affected by chronic physical risks like drought and rising temperatures. Even though we cannot exclude that companies situated in countries with severe drought and rising temperatures can be affected. Additionally, increasing temperatures in one country can affect the stability of the weather at many geographic locations. To estimate chronic physical risks at both our own and supplier sites, we use the Aqueduct tool. Some of our suppliers situated in India and China are in risk of e.g. drought and rising temperatures, but many of our suppliers and partners and our own sites are not located in areas with chronic risks. Nevertheless both our own sites and suppliers can be affected by severe weather events caused by e.g. chronic risks like increased temperature that can create wildfires and flooding. The business risk related to chronic physical risks would be similar to the risks related to acute physical risks with damaged products and/or missing or delayed deliveries from suppliers, partners with substantial business risk and increased direct costs. At our own sites product can be damaged but more likely our buildings could be damaged resulting in increased costs due to business interruptions and property loss.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

Lundbeck is influenced by changing in energy prices, carbon taxes and other climate related regulations.
Lundbeck is not covered by the EU ETS, but we are influenced by other regulations that can affect the price on GHG emissions and we expect that new European and international agreements like the Paris Agreement will result in new regulation like renewed cap and trade schemes leading to increases in carbon taxes. Also climate scenarios predict that CO2 pricing/taxes will be used more and in more countries. In IEA450 it is predicted that CO2 prices can increase by a factor 7 in most OECD countries.

In Denmark where our headquarter site and one of our chemical sites are located the government have just suggested a new taxation system for decision. This will change the existing taxation system from an energy tax to a CO2 tax thus promoting the use of renewable energy. Implementation is expected to be in 2022. Expected cost is 2.3 MDKK/year.
Our site in France is covered by two carbon tax system based on the "polluter pays" principle. In total we are paying 305,554 DKK in this system.
Another example on an energy and climate related regulation is the implementation of the directive on energy efficiency (Directive 2012/27/EU) that require companies to optimize their energy consumption. All Lundbeck's European sites need to comply with this directive. Both at our Danish sites and at our Italian site the directive has resulted in slightly increased operational costs to internal resources, consultancy costs and implementation of meters on steam at our Danish sites.
The above regulations pushes the environmental focus and ambitions towards more sustainable solutions, but will also increase the operational costs on the short run. On the long run new solutions like converting from gas to electricity that can be covered by PPA agreements will reduce the operational cost to e.g. carbon taxes that will decrease again.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

11,700,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Today our total energy costs incl. carbon tax only constitutes about 0.4% of our revenue (app. 64 MDKK compared to our revenue in 2021 at 16.3 billion DKK). In Denmark a part of the energy cost is a carbon tax currently on app. 1 MDKK a year. The new suggested carbon tax will increase this cost to app. 2.3 MDKK. At our French site we are paying 305,554 DKK in their carbon tax system.
By looking at the expected new carbon tax in Denmark we could predict that we would have a similar carbon tax as in the other countries we are operating (4 countries in Europe and 3 sites in USA). This would result in a carbon tax at 2.3 MDKK in 5 countries: 2.3MDKK*5 countries= 11.5 MDKK. This would constitute app. 0.1% of our revenue and be considered a low risk.
Costs related to other legislations like the directive on energy efficiency are considered to be low. Because we have had focus on energy optimizations for many years and due to this, prioritized to use man hours, consultancies, install meters etc., the annual costs for implementing and complying with the directive is estimated to 200,000 DKK/year for internal resources.
The total financial impact figure is therefore estimated to: The increase in carbon tax/prices: 11.5 MDKK DKK + cost for complying with the energy directive: 200,000 DKK. In total = 11.7 MDKK

Cost of response to risk

3,400,000

Description of response and explanation of cost calculation

Risks for increasing carbon taxes caused by changing in legislation or the political agenda are identified systematically. Lundbeck's sites have procedures to identify changes in HSE legislation, incl. legislation related to climate issues. When changes is identified the best implementation path is decided.

The most important method to keep the financial risks from increased energy prices and GHG taxes low, is our Climate strategy and targets. We have both long-term and annual targets. To reach our targets we have reduced our annual electricity costs with app. 25 MDKK since 2006. Costs associated with our CO2 strategy is app. 1.2 MDKK (1.5 FTE) and our energy saving projects costed 1.5 MDKK in 2021.
Another important element in reaching our Climate targets is our focus on increasing our use of renewable energy, which we believe will make us more resilient towards carbon tax systems. By the end of 2020 we signed a Power Purchase Agreement (PPA) on renewable electricity that will supply our two Danish sites with electricity from January 2022 and run for 7 years (covering electricity consumption 100%). In 2022 we will explore our possibilities for signing similar agreements for our European sites. We expect to sign an agreement by Dec 2022 and that the future new build renewable plant will start to supply our European sites by Jan 2025 and run for 10 years. The development of the Danish agreement

required internal resources estimated to 529,000 DKK. A similar amount of resources can be estimated for the future PPA's in Europe and USA. Early tracking of legislation has been beneficial in our implementation of the EU energy efficiency directive. The directive gives companies the possibility of integrating energy reviews in existing systems instead of paying external consultants for this work. We used this possibility and save app. 2 MDKK every 4 years. Instead we only have an internal cost for energy reviews on 200,000 DKK/year.
Costs related to identifying new legislation are considered necessary for having an efficient business and not as an extra cost for tracking climate related legislation. Therefore, it is not included in the "Cost of response to risk".

The total cost of response to risk is therefore: Energy reducing activities/projects: 1.5 MDKK, Internal resources for CO2 strategy (1.5 FTE): 1.2 MDKK, Energy reviews: 200,000 DKK and PPA in EU and USA: 0.5 MDKK. In total 3.4 MDKK.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical
Wildfire

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

2 of Lundbeck's production sites are located in low-risk areas (Denmark), 1 in medium risk area (Italy) and 1 in high risk area (France). The site in France is producing app. 1/3 of our internal produced products. It is located in the Provence-Alpes-Côte d'Azur region of France where the general temperature during summer month’s is known to be high in the area, and forest areas can thus be extremely dry. Also, forest/wildfires

are known to occur frequently in the south of France. Statistics tells us that there have been 2,500 fires reported each year in the period 1994 to 2016 and the number of wildfires in the region is expected to rise due to current challenge with climate changes. The Provence-Alpes-Côte d'Azur region was hit by wildfire as late as August 2021, but it did not reach our site.
The combination of ”elevated” forest close to the site (less than 12 meters on the north and east site of the site) situated above roof level, the roof construction consist of a bitumen felt with polystyrene underneath and that the site is one big common construction a roof fire is likely to involve the entire building complex with complete destruction of the site as a consequence. Though affecting 100% of stock at the time of the fire. A fire gap analysis prepared by a third party in 2021 shows that existing sprinklers and fire alarms will not be able to limit the damage of a massive roof fire and well-trained personnel will not be able to do anything significant to inhibit the fire until the local fire brigade arrives at the site. Additionally, it is evaluated that the fire brigade will have insufficient time to setup the right measures to carry out their firefighting of the roof/building complex until it is too late. The recommendations in the gap analysis to mitigate the consequences from a wildfire will create basis for decisions about further fire protection initiatives at the site.
The risk is reported in our Business impact analysis report which is presented for the Executive Management once a year and included in our risk register. The risk register is processed by the risk management organization and evaluated by our central Risk Office. The Risk Office assesses the overall risk exposure and discusses it with the Executive Management. The overall risk from a wildfire is evaluated to have medium-low impact.

Time horizon

Short-term

Likelihood

Very 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)

1,210,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Every year we prepare a Business Impact Analysis (BIA) report where the biggest supply chain risks are described incl. climate related risks. This report is based on thorough analysis and insurance inspections at our sites and in 2021 we also had our insurance broker to complete a Fire Gap Analysis for our French site due to the likelihood of a wildfire to happen. In this report the present estimated maximum loss and normal loss expectancy is calculated both to be 1,210 MDKK split between app. 500 MDKK for business interruptions in the period until all production is transferred and reestablished at partly our DK site and partly at an external contract manufacturing organization) and app. 710 MDKK for property loss.

Cost of response to risk

14,572,000

Description of response and explanation of cost calculation

The corrective action in case a wildfire happens is to transfer our production partly to Lundbeck's headquarter site where we have similar manufacturing facilities and partly to external contract manufacturing organizations that we already cooperate with.
Our preventive actions constitute of a thorough risk identification process where we have insurance inspections and annual risk assessment workshops covering all production areas, warehouses, contract manufacturers (CMO) and suppliers. The result from these inspections and assessments are gathered in our annual Business Impact Analysis (BIA) that present business interruption impact and mitigating of risks securing a resilient supply chain. The report also includes estimated property and inventory losses. The result from this analysis determines the size of our property and business interruption insurances that are set to 6.2 MDKK for 2021/22.

The additional Fire Gap analysis for our French site prepared in 2021 by our insurance broker are pointing at a devastating wildfire to be the highest climate related risk with largest impact. The gap analysis point at two main weaknesses on the site: Lack of heavy fire separation and a thick layer of polystyrene isolation on the entire roof area.

During the last 3 years we have been implementing mitigating actions like:
2019-20: Every 2 years a 50 meters clearing at the east side of the site is performed to increase factory distance to trees and bushes.

2021 (Q2): Trees have been cut in the east side of the site to limit wildfire hazards.
Total cost: 372,000 DKK
Planned mitigating actions the next 2-3 years including:
- Sprinklers with waterfall to protect the north side of the warehouse estimated to cost app. 1 MDKK.
- Roof material replacement by mineral wool. Also mandatory for an onsite solar panel project initiated in 2022 and included in the business plan to a cost at app. 7 MDKK

Cost of response to risk can therefore be summed of the cost for:
Property and Business interruption insurance costs 6.2 MDKK annually. The price for the insurance is decided based on the total risk picture described in our BIA report.
Already performed and future Fire protection initiatives at our French site: 8.372 MDKK

Comment

During the next two years similar gap analysis will be prepared for our two chemical sites in DK and Italy.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Acute physical
Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact

Increased direct costs

Company-specific description

Acute physical risks like exposure to tsunamis and flooding can affect Lundbeck's partners and suppliers. Lundbeck have suppliers and partners all over the world and some of them are situated at locations that are considered to have a high or medium risk for acute physical risks like tsunami and flooding and/or chronic physical risks like drought and temperature rise. This can lead to damaged products or missing or delayed deliveries. For the most critical suppliers and partners we do have second sources in place securing the financial impact in case of a break down at a low level. But we do have a service provider located in Tennessee, USA close to a river, where our insurance company have considered this location to have severe risk for river flooding. This service provider is running a warehouse for our medicine and in case the supplier experience a serious flooding, large part of our medicine can be damaged and our stock inventory seriously decreased. This situation has been assessed in our Business Impact Analysis process and considered to have moderate financial impact, but unlikely to happen because we have established a dual warehouse solution resulting in an overall medium-low impact.

Time horizon

Medium-term

Likelihood

Unlikely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

205,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The financial figure is calculated based on our most critical climate related risk at our service provider running a warehouse in Tennessee. The financial impact is constituted by the financial impact from:
Inventory loss: 17 MDKK
Business interruption due to loss of stock and time for moving to another warehouse (2 weeks): 188 MDKK
In all: 205 MDKK

Cost of response to risk

6,700,000

Description of response and explanation of cost calculation

To reduce risks from supply chain interruptions Lundbeck has a risk management process in place. The risk management process includes insurance inspections carried out by the insurance companies together with Lundbeck. As a part of this process our insurance company prepare a climate related risk assessment of our own sites and most critical suppliers ranking the risk for e.g. tsunamis, flooding, storms etc. The process also includes that all our partners prepare factory risk assessments that describes factory risks, including climate risks and how they are mitigated. Annually risk assessment workshops covering all production areas, warehouses, contract manufacturers, suppliers and supporting functions are performed. The primary focus of this process is to get an overview of business interruption impact and mitigation of risks securing a resilient supply chain e.g. by establishing dual sourcing and increasing our production flexibility. The most critical risks are gathered in a Business Impact Analysis (BIA) report. This report is also used to define the necessary coverage of our Property and Business Interruption insurance.

The most substantial mitigating action to reduce business interruption caused by flooding at our warehouse service provider in Tennessee, USA, is that we have implemented dual-warehousing in Nevada, USA to secure continued supply. In the event of a flooding incident at the warehouse in Tennessee all products will be moved to the warehouse in Nevada. To further reduce the period of time for resupplying lost inventory, Lundbeck will engage with manufacturers to expedite the resupply.

It is difficult to separate activities that mitigates supply chain interruptions solely caused by physical climate risks. Most activities are performed due to a mix of different risks all causing loss of inventory or business interruption. To indicate a size of cost of response we can use the cost for:
The Business Impact Analysis (BIA) process: 1 MDKK

Our Property and Business Interruption insurance: 5.7 MDKK
In all: 6.7 MDKK.

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?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

Lundbeck is exposed to fossil fuel price increases and climate scenarios predict that countries use of carbon pricing schemes will increase. Our two Danish sites and our French site is exposed to carbon taxes. The current situation with low energy prices and the emerging possibilities for entering Power Purchase Agreements (PPA's) creates a good opportunity for Lundbeck to enter long-term PPA agreements with renewable electricity to a low fixed energy price.

Entering a PPA is also a strong and important contribution to Lundbeck's climate targets and to our commitment to “Business Ambition for 1.5°C” of leading companies committing us to have Net Zero emissions by latest 2050.

In 2020 we signed a PPA that will result in establishing a solar panel park covering the entire electricity consumption of our two Danish sites from January 2022. Rapid adoption of a long-term PPA with renewable energy is a good opportunity to become more resilient to increased energy prices and carbon taxes/pricing schemes.

In 2021/22 we are exploring our possibilities for entering PPA's covering our sites in Europe and USA. Parallel our Italian site are installing on-site solar panels that will produce 500 MWh/year corresponding to 168 tons CO2. The business case for the solar panels is positive as we have locked the price for 15 years at a very low level: 796 DKK/MWh compared to current prices at app. 1,700 DKK/MWh. Possibilities for on-site solar panels at our French site will be investigated during 2022.

Our continuous effort for reducing our energy consumption is also an important contribution to reduce the risk from increasing energy cost and carbon taxes/pricing. Since 2006 we have reduced our energy consumption by 32% reducing our annual energy cost by 25 MDKK.

Finally we are exploring our possibilities for converting gas driven boilers to electrical driven equipment. In 2022 a business case for such solution will be prepared for our headquarter site.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

12,950,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

By signing the PPA with a fixed low energy cost we will reduce our energy cost by app. 1 MKK/year from 2022.
By installing on-site solar panels at our Italian site we save app. 450,000 DKK/year
Additionally we believe that entering Power Purchase Agreement (PPA) will make us more resilient towards increasing energy prices and carbon taxes/pricing schemes. In IEA450 it is predicted that CO2 prices can increase by a factor 7 in most OECD countries. By looking at the governmental suggested new carbon tax in Denmark it is a very high estimate. Instead we could predict that we would have a similar carbon tax as in Denmark in the other countries we are operating (4 countries in Europe and 3 sites in USA). This would result in a carbon tax at 2.3 MDKK in 5 countries: 2.3 MDKK*5 countries= 11.5 MDKK.
In total:
Reduced energy cost due to the PPA: 1 MDKK/year
Reduced energy cost due to on-site solar panels in Italy: 450,000 DKK/year
Avoided CO2 tax/pricing: 11.5 MDKK
In all: 12,950,000 DKK

Cost to realize opportunity

3,229,000

Strategy to realize opportunity and explanation of cost calculation

Our strategy to reduce our exposure to increasing CO2 taxes/pricing is to reduce our energy consumption and decrease the amount of fossil fuel used at our sites. By reducing our energy consumption and by decreasing the amount of fossil fuel and increasing the amount of renewable energy, we reduce the financial impact from increasing CO2 taxes/pricing. Our management method to realize this opportunity is our continuous

development of our Climate strategy where we raised our ambitions in 2019 by joining the “Business Ambition for 1.5°C” of leading companies and committed to have Net Zero emissions by latest 2050. Additionally, we developed a new Science Based Target during 2020 which was approved and announced in the beginning of 2021. Since 2006 we have used our absolute climate targets as an important driver for our continued focus on energy reductions. So far, we have achieved a 30% reduction of our energy consumption since 2006. As it gradually becomes more difficult to continue reductions of our energy consumption, we have increased our focus on transitioning our use of fossil fuels to renewables. A specific example of decreasing our fossil fuel use is our decision about entering Power Purchase Agreements (PPA) with additional renewable energy. Our current agreement is supplying our two Danish sites by January 2022 and 7 years forward. In 2021 we started exploring similar possibilities for PPA's to cover our EU sites. We expect to sign an European PPA by Dec 2022 and receive electricity from a the plant from Jan 2025 for 10 years. Additionally our Italian site is installing on-site solar panels in 2022 covering 7% of the electricity consumption at that site and our French site will explore possibilities for on site solar panels during 2022.
Business ambition for 1.5C is also the driver for developing roadmaps for converting fossil and biooil driven boilers to electrical boilers, that can be supplied by PPA's. Apart from reducing our carbon tax, this will also reduce the risk for limited supply of biooil, that we experienced ultimo 2021, increasing our Scope 1 emissions from our chemical site in DK in 2022 as we have to use fossil oil in second half of 2022.
The cost for realizing this opportunity is constituted by:
Internal resources for developing the Climate strategy (1.5 FTE): 1.2 MDKK
Cost associated with energy saving projects: 1.5 MDKK.
Internal resources (600 hours) and consultancy for the PPA's: 529,000 DKK
In all: 3,229,000 MDKK.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resilience

Primary climate-related opportunity driver

Other, please specify

Good Environmental, social and corporate governance (ESG) rating have a positive financial impact on financing and funding

Primary potential financial impact

Increased access to capital

Company-specific description

There is an opportunity and potential for good Environmental, Social and Corporate Governance (ESG) performance to have a positive financial impact on financing/funding for Lundbeck on two overall categories (1) Regular bank loans and (2) Corporate bonds. For the bank loans it would effectively be an agreement with the banks, that if Lundbeck were to improve e.g. carbon emission performance by 10% the price would drop 3-5 bps (0.02% - 0.05%). Consequently, if no improvement were made Lundbeck would either pay the same, or have to pay extra 3-5 bps depending on the agreement. Primo 2021 we were offered to change an existing loan to a new type of loan: A sustainability linked loan. By changing to a sustainability linked loan we have the opportunity to save interest savings if we achieve some defined targets for selected ESG/KPI's.

For the bond market investors have a lot of focus on ESG in general, but the pricing impact is estimated to be 1-3 bps since Lundbeck is not in an industry where there is a net positive climate impact or a severely negative impact (e.g. like extraction or energy intensive production industries).
Both in 2019 and in 2020 Lundbeck considered taking up green loan, but due to extended lead times decided against it, but in 2021 we decided to apply for a sustainability linked bank loan with 3 sustainability KPI's. Two of them climate related KPI:
KPI 1: Absolute scope 1 and 2 CO2 emissions per year, running from 2021 - 2025 with a total emission reduction at 15% (3%/year)
KPI 2: Share of total electricity from renewable sources per year, running from 2021 - 2025 increasing from 47% to 85% (Respectively in the years 2022 to 2025: 50%, 55%, 60%, 85%). Only renewable electricity according to RE100 Technical criteria can be procured.
KPI's was agreed with the bank ultimo 2021 and we expect to have finalized all paper documentation and signed the loan in June 2022.
Going forward Lundbeck will continuously follow upcoming opportunities for sustainability linked bonds and loans through dialogue with our banks.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,000,000

Potential financial impact figure – maximum (currency)

2,800,000

Explanation of financial impact figure

There is potential for good ESG performance to have a positive financial impact on financing/funding for Lundbeck on two overall categories (1) Regular bank loans and (2) Corporate bonds.
Loans: Current Revolving Credit Facility of EUR 1.5 bn. Saving potential: 0.03%*1,500,000,000 = 450,000 EUR/year equal to app. 3,354,700 DKK/year
Bonds: Benchmark size – saving potential: 0.02%*500,000,000 = 100,000 EUR/year equal to app. 745,500 DKK/year
In total: 4,100,200 DKK.
* This assumes full drawing on the RCF, which is not the case for Lundbeck currently. However, this has been mitigated by using the lower end of the range provided to us by the banks.
The financial impact calculated above is based on our current loan portfolio and an assumption of a potentially future bond issuance of a benchmark size (i.e. 500 MEUR). The numbers used have been discussed with our banking partners to get insights from experts in the field. However, given that Lundbeck current loans are not green loans, and the impact on the pricing of a potential bond are virtually impossible to

predict these should be considered as estimates of a high certainty. Both the corporate loan and bond market have seen an increased focus on ESG; bond market more than loan market. Some bond investors have green funds and certain ESG requirements for what they can invest in. Any investor that can be unlocked could have a positive price impact, which also goes for showing investors that Lundbeck is a company with strong ESG. In this sense being focused on a higher costs if performing badly on ESG compared to the benefit of being a good performer.

The possibility for changing our existing loan to a sustainability linked loan that we are applying for is estimated to a possibility of saving 2,800,000 DKK in interests if all KPI's are met and an estimated downside if only some of the KPI's are met at 1,000,000 DKK.

A potential financial impact range is therefore from 1,000,000 DKK to 2,800,000 DKK.

Cost to realize opportunity

2,200,000

Strategy to realize opportunity and explanation of cost calculation

Generally, shareholders and customers are positively inclined for ESG and climate related initiatives which could add to Lundbeck's image. Our strategy to be able to exploit the positive financial impact on financing/funding is to increase focus on the targets set out in the agreements and to maintain our high climate ambitions. It impact business units like: Treasury, Legal, Compliance & Sustainability and Health, Safety & Environment. At the moment our Compliance & Sustainability and Health, Safety & Environment departments are increasing the focus about selecting which benchmarks are the most significant and most used by banks and investors and improving our disclosure of the requested information. In addition to CDP Climate we have selected the following rating/indices, which include climate, for targeted responses and dialogue in 2021: Sustainalytics, MSCi, Moody's, ISS ESG, FTE Russel and Nasdaq Nordics. Our climate governance, management, disclosure and targets reporting contribute to strong ESG ratings for Lundbeck. Examples on our high ambitions on climate actions is our decision about signing the "Business Ambition for 1.5°C" of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement (Dec 2019) and our development of a new Science Based Target during 2020 which was approved and announced in the beginning of 2021.
To exploit the opportunity for changing an existing loan to the offered sustainability linked loan that will run from 2021 to 2025, we had to develop and achieve 3 sustainability KPI's. During 2021 we have agreed on the 3 KPI's incl. timeline with the bank and we expect to have finalized all paper documentation and signed the loan in May 2022. The climate related KPI's are:
KPI 1: Absolute scope 1 and 2 CO2 emissions per year, running from 2021 - 2025 with a total emission reduction at 15% (3%/year)
KPI 2: Share of total electricity from renewable sources per year, running from 2021 - 2025 increasing from 47% to 85% (Respectively in the

years 2022 to 2025: 50%, 55%, 60%, 85%). Only renewable electricity according to RE100 Technical criteria can be procured.

The current costs for this strategy are all costs for internal resources for:
- Responding to benchmarks: Internal resources (1.25 FTE): 1 MDKK
- Development of the climate ambition and targets (1.5 FTE): 1.2 MDKK
- Development of KPI's for Sustainability linked loans is considered insignificant.
In all: 2.2 MDKK.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of recycling

Primary potential financial impact

Reduced direct costs

Company-specific description

Lundbeck’s medicine is based on chemical synthesis hence large amounts of chemicals are used to produce the active pharmaceutical ingredients. Several of the most used solvents are both expensive and emits large amounts of CO2 when being produced. In Lundbeck’s carbon footprint chemicals and raw materials for the chemical production of active pharmaceutical ingredients take up 39% of all the emissions

related to product-related purchased goods. The ability to recycle chemicals and use them repeatedly in the production synthesis is therefore beneficial from a financial point of view as it reduces cost for raw materials, but it also reduces our scope 3 emissions and contributes to achieving our scope 3 target. In 2021 Lundbeck managed to recycle 65% of the used volatile organic chemicals in our chemical production and we are continuously looking for new possibilities recycling of chemicals. In 2021 a new method for palladium recycling and toluene recovery was implemented creating a possibility for reducing CO2 emissions by app. 422 tons/year and saving 9 MDKK/year.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

9,520,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

80% recovery of toluene: 0.98 MDKK in savings (The initiative will recover in total 214,000 L toluene at an average cost at 4.6 DKK/L)
90% recovery of palladium: 7.54 MDKK in savings (The initiative will recover in total 14.85 kg pure palladium at an average cost at 508,000 DKK/kg)
Savings with new palladium supplier: 1 MDKK (during negotiation with manufacture/recycling company of the palladium catalyst, this saving was

shown).
Extra cost of recovery and transportation: 0.51 MDKK
Total: 0.98+7.54+1+0.51= 9.52 MDKK

Cost to realize opportunity

1,510,000

Strategy to realize opportunity and explanation of cost calculation

Lundbeck's production sites are continuously looking for new possibilities to increase recycling of more chemicals. The strategy is to find ways to recycle the chemicals that are used in large amounts or chemicals that are expensive to procure. One of the chemicals that have been in focus the recent years is palladium (Pd) that is a costly raw material and also have a significant CO2 emission as it is extracted from mines in Russia and South Africa and following transported worldwide (Average at 11.29 tons CO2 is emitted per kg of Pd). The worldwide demand of palladium is increasing, which has led to an increasing price level over the past years.
The recovering of the toluene will give a reduction in CO2 emission at 255 tons (1.49 kg CO2/liter toluene).
In Q1 2021 a new innovative methodology was implemented. Via a cooperative process between Lundbeck and the Pd supplier, Pd is now recycled leading to less CO2 emissions, less raw material consumption, less waste, improved waste sorting, reduced cost and reduced risk from metal price fluctuations due to lower consumption. A site benefit from the process is increased recycling of toluene reducing CO2 emissions by 255 tons (1,49 kg CO2/liter toluene).
The setup is implemented at our Danish site without any cost, however a better solution to handle the waste streams will be implemented in 2022 with a cost at 1 MDKK.
The total cost for the strategy is estimated to:
Extra cost of recovery and transportation: 0.51 MDKK
Establishment of solution for waste stream: 1 MDKK
In all: 1.51 MDKK

A new solution for recovering Ethanol, Isopropanol and Acetone is currently being exploited. One solution is to have an external company to do the job and otherwise to build the capacity inhouse in a dedicated recovery plant. During Q4, 2021 and Q1-Q2, 2022 samples has been sent to the external company and a business case will be prepared during Q3, 2022. In the same period a technical solution for inhouse recovering has been exploited and a solution and business case is being prepared.
A team has been evaluating the potential amount of solvents to be sent to the recovery plant and with a recovery percent at conservative 80%,

the following amount could be produced:
Ethanol: 430,000 L
Isopropanol: 160,000 L
Acetone: 160,000 L
The recovery will when implemented give a cost saving in buying these solvent at 5.7 MDKK and a CO2 reduction at 1,155 tons CO2

Comment

C3. Business Strategy

C3.1

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

Row 1

Transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

In 2019 we signed the Business ambition for 1.5°C and committed to have Net Zero emissions in 2050 at the latest. In Feb 2021 we announced our new 1.5°C aligned and approved science based target and ultimo 2021 we initiated the development of a transition plan. The transition plan will be developed according to CDP's Technical note and TCFD's guidance on transition planning and aligned with a 1.5°C world. Our transition plan will include initiatives concerning:
- Use of renewable electricity and energy for our entire business worldwide
- Transition to EV's
- Climate conscious travel behavior and increased use of virtual meetings
- Logistics moving from air to sea and gradually increase the use of sustainable fuels

- Circular solutions like increased recycling of solvents and reduced material use e.g. for our cartoon in secondary packaging materials
- Engagement with our suppliers about sustainable solutions, collection of emission data and include requirements about renewable energy in contracts

The transition plan is expected to be approved by our Executive management in Dec 2022 and published along with our Sustainability report for 2022 and at the general assembly in Q1 2023.

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 IEA NZE 2050	Company-wide		Parameters: In our scenario analysis we have used a top-down approach and identified the potential impact on: Carbon pricing, fuel availability, policy regulation, technology, reputation, production and supply chain disruptions, physical damage to assets and changes in demand for our products. Important inputs to our scenario analysis are: - The TCFD and CDP Guidance documents, the public scenarios and National and EU climate targets - Our Business Impact Analysis (BIA) Report that consider physical climate related risks at our sites and in our value chain. - Our assessment of transitional risks like regulatory risks at both company and asset level mainly assessed by the Corporate Health, Safety and Environment (HSE) department and the Compliance & Sustainability department. Evaluation of public climate scenarios is included in this assessment.

			All material risks are reported into our company wide risk management process that are processed by the risk management organization, reviewed by Executive Management, and finally presented for the board of directors. Assumptions: The NZE Scenario shows an achievable pathway to achieve Net Zero CO2 emissions by 2050. The scenario also meets key energy-related SDGs and is consistent with limiting the global temperature rise to 1.5°C (with a 50% probability). In IEA NZE 2050 following assumptions has been considered material for Lundbeck: 1. Increased use of carbon pricing: We are already experiencing an increase in carbon tax in Denmark and the NZE scenario foresee further increases with app. 50% in 2030 in most parts of the world. 2. Limitations within fossil fuels. NZE predict an 80% decrease in use of fossil fuels in 2050 and no new sales of fossil fuel boilers already by 2025. 3. Rapid deployment of renewable energy. In 2030 is predicted four times the scale as in 2020. 4. The NZE also predict 60% increased sales of electric vehicles (EVs) in 2030 followed by an increased need for charging stations. Analytical choices: The time horizon for our scenario analysis is 1 – 10 years corresponding to our SBT target running to 2034 and Lundbeck's financial planning horizon of 0-2 years and 3-10 years (short- and long term). This corresponds to the NZE Scenario that uses year 2030 in many of the predictions.
Physical climate scenarios RCP 4.5	Company-wide		Parameters: In our scenario analysis we have used a top-down approach and identified the potential impact on: Carbon pricing, fuel availability, policy regulation, technology, reputation, production and supply chain disruptions, physical damage to assets and changes in demand for our products. Important inputs to our scenario analysis are: -The TCFD and CDP Guidance documents, the public scenarios and National and EU climate targets. -For the physical scenarios, we have used the forward-looking scenarios from WRI’s Aqueduct atlas and the regional fact sheets from IPCC’s sixth assessment report. -Our Business Impact Analysis (BIA) Report that consider physical climate related risks at our sites and in our value chain.

			-Our assessment of transitional risks like regulatory risks at both company and asset level mainly assessed by the Corporate Health, Safety and Environment (HSE) department and the Compliance & Sustainability department. Evaluation of public climate scenarios is included in this assessment. All material risks are reported into our company wide risk management process that are processed by the risk management organization, reviewed by Executive Management, and finally presented for the board of directors. Assumptions: The RCP 4.5 predict a 2-3-degree temperature rise and include both transitional and physical changes. RCP 4.5 is chosen as a second scenario as it probably is a more realistic scenario than the IEA NZE and it is recommended by TCFD to include a GHG pathway that result in warming of app. 2.7 degree above pre-industrial levels. In RCP 4.5 we have focused on the physical scenarios as transitional risks already are covered by IEA NZE. The physical scenarios in RCP 4.5 across the world varies but in general it predicts increased temperature, drought, rising sea levels, changes in precipitation, increased frequency of severe weather events and river flooding. Following assumptions has been considered material for Lundbeck: 1. Increased temperature (1- 3 degree increase) in southern part of Europe where our French site is located increasing the risk for wildfires. 2. App. 20% increased precipitation and increased frequency for river flooding in Eastern North America where our warehouse service provider is located. Analytical choices: The time horizon for our scenario analysis is 1 – 10 years corresponding to our SBT target running to 2034 and Lundbeck's financial planning horizon of 0-2 years and 3-10 years (short- and long term).

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

We have chosen the IEA NZE 2050 and the RCP 4.5 in our scenario analysis because they are representing pathways to achieving the ambitious net zero CO2 emissions by 2050 and limiting the global temperature rise to 1.5°C (IEA NZE) and a probably more realistic future with warming of app. 2.7°C (RCP 4.5). It is recommended by TCFD to include a 1.5°C aligned pathway and a more realistic pathway. By using the IEA NZE we are also looking at a scenario that corresponds to our own 1.5°C aligned climate targets.
In our scenario analysis we evaluate several parameters: Carbon pricing, fuel availability, policy regulation, technology, reputation, production and supply chain disruptions, physical damage to assets and changes in demand for our products.
Scenario analysis is used for evaluating future business risks and opportunities and to highlight likely financial and non-financial impacts in the future. Additionally, it guides the needed levers and level of ambition in our overall climate strategy.
Focal questions:
1. What predicted future developments need to be evaluated?
2. What initiatives are needed to develop the business in accordance with the climate scenarios and relevant timing?
3. What variables are needed to support decision-making?
The focal questions are considered company-wide in a time horizon of 1 – 10 years covering the time horizon for our SBT target running to 2034 and Lundbeck's financial planning horizon of 0-10 years (short- and long-term).

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

The analysis of the NZE scenario concludes that we should continue to develop our 1.5C aligned climate strategy and Net Zero ambition, go 100% renewable energy at all sites and increase EV's in our fleet. The NZE predict:
1. Increased carbon pricing at 50% in 2030 across the world: At our sites in DK and Fr, we pay carbon tax and in DK the carbon tax is increasing. If the DK carbon tax were copied to the other countries, we are operating in it would constitute app. 0.1% of our revenue. An increase by 50% would be an insignificant extra cost, but still, it is impacting our climate strategy towards increased use of renewable energy.
2. 80% decrease in use of fossil fuels in 2050 and no new sales of fossil fuel boilers by 2025. At 3 of our sites we use fossil fuels in our boilers and at 1 site we use biooil. Supply of biooil has become limited and we expect to be forced to switch to fossil fuels at this site by June 2022. NZE impact our timeline for converting to electrical boilers faster at all sites. A business case prepared during 2022 will create basis for this timeline.
3. Rapid deployment of renewable energy. In 2030 four times the scale as in 2020. By Jan 2022 our PPA will supply our two Danish sites with renewable electricity thus covering app. 60% of our electricity consumption. In 2022 we are exploring a PPA covering our sites in Europe increasing this share to app. 85%. Additionally, our Italian site is implementing on-site solar panels and our French site is exploring a similar solution.

4. 60% increased sales of electric vehicles (EVs) in 2030. Lundbeck lease app. 2,800 cars and our future Car policies will be impacted. In 2021 EV's were introduced EV's in our Car policy for HQ and our sales office in USA has developed a roadmap for converting to EV's: 50% in 2030 and 100% in 2035. A business case incl. the financial impact will be developed in 2022 and create basis for developing a timeline for our fleet worldwide. Accordingly charging stations are being installed across our sites.
The analysis of the RCP 4.5 scenario concludes that we should continue to evaluate physical risks at our sites and in our value chain. The RCP 4.5 predict:
5. 1- 3 degree increased temperature in the south of Europe increasing the risk for wildfires at our French site. In 2021 a fire gap analysis was prepared and will create basis for decisions about further fire protection. The financial impact from a wildfire is estimated to 1,210 MDKK and future cost for increased fire protection will be app. 8 MDKK.
6. 20% increased precipitation and increased frequency for river flooding in Eastern North America where our warehouse provider is located close to a river. This location is considered to have severe risk for river flooding. If this supplier experiences a serious flooding our stock inventory will seriously decrease. This has been assessed to have a financial impact at 205 MDKK, but unlikely to happen due to an established dual warehouse solution in Nevada.

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	Our financial planning runs up to 10 years and using this time horizon we only see that, the top concerns for our patients are effectiveness of the treatment and the cost of the medicine. Lundbeck's products are mainly based on chemicals and chemical synthesis and only a very small part is based on proteins. Neither of these raw materials are dependent on biological raw materials, that could be affected by climate changes. Additionally, our products are pharmaceutical products that must follow strict medical regulation and neither our products or the packaging materials are allowed by this regulation to change due to climate risks or opportunities. We expect that some future products will be developed based on biologics that potentially are impacted by climate changes, but development of pharmaceutical products up to market launch takes 10 -15 years and risks related to new product are

		continuously being evaluated via our risk management system. Another area that indirectly influences our business and climate strategy is EU's, Health organizations and financial institutions increasing focus on climate change. Examples are NHS in UK that from 2023 will require suppliers to publish carbon reduction plans for contracts larger than £5M, EU's new sustainability reporting requirements and the financial sector that now are offering sustainability linked loans. All these initiatives make good climate performance a prerequisite for selling products and obtaining favorable loans. A substantial business decision in 2021 was to consult our banking partners and agree on a sustainability loan where we can save up to 2.8 MDKK in interests if 3 defined KPI's are achieved. In 2021 finalized all paper documentation and expect to sign the loan in June 2022. Another substantial business decision in 2021 impacted by the increasing focus on climate change was the decision about developing a low carbon transition plan during 2022 and to be ready to publish in 2023. Finally, are the increased sustainability reporting requirements from EU being evaluated. Primo 2022 a gap analysis was prepared by our external assurance consultant and internal evaluation and prioritization will be performed during 2022.
Supply chain and/or value chain	Yes	Many of our suppliers and partners are situated in Europe and USA at locations where extreme weather events rarely have a character that affect product reliability, but we also have suppliers and partners located in Japan, India and China at locations that are considered to have a high or medium risk for acute physical risks like flooding, tsunami and/or chronic physical risks like drought and temperature rise. Every year a Business Impact Analysis is prepared based on results from e.g. factory risk assessments made by our key partners. The primary focus of this process is to get an overview of business interruption impact and mitigation of risks securing a resilient supply chain and finally decide the size of our business insurance. Every year a continuity plan is being decided including mitigating actions and a decision on insurance size the current year. The most critical risk with financial impact identified in 2020 is our warehouse service provider located in Tennessee, USA close to a river. A location that today is considered to have a high risk for flooding. To mitigate business interruption caused by a potential flooding the most substantial mitigating action to reduce business interruption caused by flooding at our warehouse service provider in Tennessee, USA, is that we have implemented dual-warehousing in Nevada, USA to secure continued supply. In the event of a flooding incident at the warehouse in Tennessee, it will take 1 - 2 weeks to get the warehouse in Nevada up running with the

		same capacity. To further reduce the period of time for resupplying lost inventory, Lundbeck will engage with manufacturers to expedite the resupply. Time horizon: 2020 - 2030.
Investment in R&D	Yes	The way our investment in Research and Development are affected is through requirements to our Contract Research Organizations (CRO's) to comply with our code of conduct and by our audits: Both activities have the purpose to ensure proper conditions at their sites. The most substantial business decision influencing our cooperation with CRO's is our decision about developing a new Science Based Target. This target includes absolute reductions in our scope 3 where CRO services are constituting a significant part and therefore selected to be enrolled in our scope 3 reduction activities. In 2021 we engaged with our largest CRO's and received information about emissions related to the service they provide to us, their climate targets and initiatives for emission reduction e.g. the possibilities for using renewable electricity and reducing travel activities will be areas for achieving significant emission reductions going forward. CRO emissions is typically distributed with 60% in scope 2 and 40% related to business travel. During the coming 1-3 years we will start to require our largest suppliers to use renewable electricity as a part of our contractual requirements and our CRO's are included in this group of suppliers. Our investments in R&D can also be affected by our ability to obtain favorable financing/funding and by investors trust in our capabilities. Today we experience that good ESG rating have a positive financial impact on financing/funding for Lundbeck on two overall categories (1) Regular bank loans and (2) Corporate bonds. This situation has impacted our decision about developing a sustainability linked loan in corporation with our banks, giving us the possibility of saving up to 2.8 MKK in interests in defined KPI's are achieved.
Operations	Yes	Lundbeck's operations can be affected by both transitional changes like reputation, increasing reporting requirements and carbon taxes and by physical changes like increasing temperatures, increasing risks for wildfires and increasing risk for flooding. Both transitional and physical risks are evaluated in our risk management system and mitigating and preventive actions implemented. To avoid many of the transitional risks we are continuously developing our Climate strategy and sustainability reporting. The most substantial business decisions in 2021 related to transitional changes was our announcement of our SBT target running from 2019 - 2034, the decision about developing a Low carbon transition plan

		during 2022 both to comply with future climate requirements and societal expectations to companies and the decision about beginning to explore our possibilities for entering a PPA during 2021/22 in Europe reducing the impact from increasing carbon pricing. Physical risks are continuously being evaluated via our annually updated Business Interruption Analysis process and mitigating actions are continuously being improved. In 2021 a fire gap analysis was prepared by a third party at our French site to evaluate the risk from a wildfire. The site is located in an area where wildfires are increasingly likely to happen. The Gap analysis showed that existing sprinklers and fire alarms will not be able to limit the damage of a massive roof fire. The recommendations in the gap analysis to mitigate the consequences from a wildfire will create basis for decisions about further fire protection initiatives at the site in the coming 1 - 3 years.

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	Indirect costs Capital expenditures Access to capital	Indirect costs: Lundbeck's indirect costs are impacted by transitional changes like increasing energy prices and carbon taxes and scenarios like IEA NZE that predict further increases in carbon pricing, limitations within use of fossil fuels and rapid deployment of renewable energy during the next 10 years. These changes impact Lundbeck's climate strategy to continue to implement energy optimizations at our sites and to increase our use of renewable energy e.g. by establishing PPA agreements as we have done at our Danish sites and install on-site solar panels like we are doing at our Italian site in 2022. The financial impact from the current carbon tax that we pay in DK and France was 1.3 MDKK in 2021. The cost for implementing energy optimizations in 2021 was 1.5 MDKK, but after payback time in 1-3 year it will give an annual saving at app. 700,000 DKK/year. We have also implemented two energy initiatives at our French site where the cost was covered by a national grant turning the cost to zero while creating a reduction in energy cost at app. 470,000 DKK/year. Since 2006 our annual energy costs have been reduced by app. 25 MDKK/year due to optimizations. Establishment of

		our PPA in DK will reduce energy costs with additional 1 MDKK/year from 2022 due to a fixed price agreement and installation of solar panels is expected to reduce energy costs with additional 450,000 DKK/year from 2023 also due to a fixed price agreement. Capital expenditures: Climate related physical changes like increasing temperatures are increasing the risk for wildfires at our site in France. Therefore, a fire gap analysis has been developed in 2021 recommending firefighting actions like additional sprinklers and replacement of existing roof material with mineral wool. The improvements have been included in our business plan and are expected to be implemented during the next 2 – 3 years increasing capitals expenditures in this period with app. 8 MDKK. In the previous years our assets have also been impacted by climate events. E.g. our headquarter functions has experienced heavy rain and following flooding. Repairs and following mitigating actions in the years after amounted to app. 13 MDKK. The mitigating actions included e.g. establishment of two catch basins the one outside in a park area gathering water from our own site and water from the surrounding municipal roads and neighbor companies. Another example is the establishment of app. 800 m2 of green roofs in 2020 which reduces the load of the sewage systems in heavy rain situations. The additional cost for green roofs compared to roofing felt was 627,000 DKK. To reduce risk from business interruptions we are continuously improving our production flexibility. We have 4 independent production and packaging facilities that can take over for each other and reduce the impact of production breakdown. During 2020 we increased the production capacity (installation of new machinery) at our French site, making it possible to reduce the impact by 25% in case of a break down at our headquarter site. This required an investment at app. 15 MDKK. Access to capital: The transitional climate related change with increasing awareness on the consequences from climate changes have increased the financial sectors focus on the importance of companies' awareness about climate related risks and opportunities and their resilience towards climate related risks. This has created financial opportunities for companies that have good ESG performance by offering sustainability linked corporate bonds and loans. In 2021 Lundbeck decided to apply for changing an existing loan to a sustainability linked loan including a potential saving on 2.8 MDKK in interests if defined sustainability KPI's are met and an estimated downside if only some of the KPI's are met at 1 MDKK. In 2021 we agreed on the KPI's with the bank and all needed documents were prepared and we expect to sign the loan agreement

		during 2022. Two of the KPI's relates to our climate performance: KPI1: Scope 1 and 2 reductions and KPI2: Share of renewable electricity. The loan will be running from 2022 – 2025.

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

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

2019

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

29,025

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

9,405

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

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

38,430

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

100

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

100

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

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

100

Target year

2034

Targeted reduction from base year (%)

63

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

14,219.1

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

24,694

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

7,489

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)

32,183

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

25.8024278321

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

Our target cover 100% of our headquarter functions, all our 4 production sites, 3 research, development and administrative sites in USA and one administrative site in Poland.

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

By the reporting year we have achieved app 26% of our target. This reduction is mainly gained by improving our operational efficiency, reduced activity in the fleet and increased efficiency in the fleet. To achieve further reductions in scope 2 our most impactful initiative is our new Power Purchase Agreement (PPA) that will supply our two Danish sites, constituting app. 50% of our scope 2 emissions, with renewable electricity by Jan 2022. In 2022 our Italian site will install solar panels on the roofs and a similar solution is being investigated at our French site. Additionally we are investigating our possibilities for establishing another PPA covering the rest of our European electricity consumption. For our scope 1 emissions we are investigating our possibilities for converting our gas boilers to preferably electricity based equipment alternatively renewable fuels.

Emissions from our fleet are decreasing due to more efficient cars, but we are also gradually converting the fleet to EV's.

The progress curve is likely to be variable because one of our preferred levers are PPA's that make large immediate reductions when they are up running but takes time to establish and built.

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

Target reference number

Abs 2

Year target was set

2019

Target coverage

Company-wide

Scope(s)

Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 1: Purchased goods and services
Category 4: Upstream transportation and distribution
Category 6: Business travel

Base year

2019

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

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

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

120,283

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

120,283

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

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

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

76

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

100

Target year

2034

Targeted reduction from base year (%)

19

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

97,429.23

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

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

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

148,524

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

148,524

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

-123.5726096832

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

The target covers all our activities within the scope 3 categories: 1. Purchased goods & services, 4. Upstream transportation and distribution and 6. Business travel.

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

Compared to our baseline we have seen:

61% reduction in our Business travel. We expect travel related emissions will increase slightly as travel restrictions loosen up around the world, but in 2021 a new climate conscious travel policy was decided, promoting virtual meetings when ever possible and additionally tools for choosing the least emitting travel choice are being developed e.g. the possibility of seeing the estimated CO2 emission from specific travels prior to booking.

5% increase in our Upstream transportation and distribution due to increased road transportation of a new product that require cooling during transportation. Since 2019 (baseline) we have reduced emission from air born distribution by 38% by converting to sea transport. In 2022 we will convert two more large destinations to sea instead of air and further more destinations will follow. Additionally we are changing the supply chain for the new product that gave rise to the increase in emission from road transport, to a less CO2 intensive supply chain.

40% increase in Purchased goods and service - non product related. This large increase is due to this category is solely calculated based on spend and related emission factors. Our business has developed and increased spend and therefore increased emissions with the same rate. In 2021 we were in dialogue with our largest suppliers about retrieving emission data and reducing emissions. This means that we from 2022 will be able to improve data quality for our largest suppliers by including actual supplier data in our inventory and achieve reductions as our suppliers achieve reductions. The emission data that we currently have collected from our suppliers show big differences compared to the spend based data we have in our inventory. The work with engaging with suppliers will expand in 2022 and pilot projects with requiring suppliers to use renewable electricity will also be implemented and gradually expanded to more suppliers.

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

Target reference number

Abs 3

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)

24,694

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

7,489

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

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

32,183

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

100

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

100

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

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

100

Target year

2022

Targeted reduction from base year (%)

3

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

31,217.51

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

24,694

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

7,489

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)

32,138

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

4.6608457881

Target status in reporting year

New

Is this a science-based target?

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

Target ambition

Please explain target coverage and identify any exclusions

Our target cover 100% of our headquarter functions, all our 4 production sites, 3 research, development and administrative sites in USA and one administrative site in Poland.

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

This target was established by the end of 2021 in order to support our longer term reduction target running to 2034. A 3% annual reduction matches a KPI in a sustainability linked loan that we will take in 2022.

To achieve reductions in scope 2 our most impactful initiative is our new Power Purchase Agreement (PPA) that will supply our two Danish sites, constituting app 50% of our scope 2 emissions, with renewable electricity by Jan 2022. In 2022 our Italian site will install solar panels on the roofs and a similar solution are being investigated at our French site. Additionally we are investigating our possibilities for establishing another PPA covering the rest of our European electricity consumption. For our scope 1 emissions we are investigating our possibilities for converting our gas boilers to preferably electricity based equipment alternatively bio based fuels.

Emissions from our fleet are decreasing due to more efficient cars, but we are also gradually converting the fleet to EV's.

The progress curve is likely to be linear due to the short timeframe.

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

Abs1

Abs2

Target year for achieving net zero

2050

Is this a science-based target?

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

Please explain target coverage and identify any exclusions

This target was established when we signed the “Business Ambition for 1.5°C” pledge, ultimo 2019. We have signed option 2 and hereby committed us to develop a midway Science Based Target and to have Net Zero emissions in 2050. This target is our overarching ambition about having Net Zero emissions covering our entire business (scope 1, 2 and 3) including using carbon removal credentials for any residual emissions by no later than 2050.

To clarify the needed actions for achieving Net zero emissions we initiated the development of a Low carbon transition plan ultimo 2021 and expect to publish it primo 2023. We also expect to commit to and submit a Science based Net zero target primo 2023 for approval by SBTi.

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

We are currently developing our Low Carbon transition plan and do not have all the levers identified yet. The already identified levers will reduce our emissions by app 60%, but we do expect to be able to reduce more as e.g. new technologies arise. Our approach is to favor reduction initiatives over Carbon removals. We have at the moment invested in carbon removals in insignificant degree but expect to wait with further investments at least to the end of our 2019 - 2034 target.

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

We will start investigating possibilities for carbon removals by the end of our target period 2019 - 2034. We will only invest in acknowledged and certified carbon removals.

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	2	
To be implemented*	7	350
Implementation commenced*	3	3,743
Implemented*	4	533
Not to be implemented	0	

C4.3b

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

Initiative category & Initiative type

Energy efficiency in buildings

Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)

2

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)

18,000

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

1,487,400

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

Due to the investment is payed 100% by a C2E grant the pay back time for Lundbeck is less than a year.

Initiative category & Initiative type

Energy efficiency in buildings

Other, please specify

Installation of new chillers

Estimated annual CO2e savings (metric tonnes CO2e)

419

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

Scope 1

Voluntary/Mandatory

Voluntary

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

450,000

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

7,435,600

Payback period

<1 year

Estimated lifetime of the initiative

11-15 years

Comment

Due to the investment is payed 100% by a C2E grant the pay back time for Lundbeck is less than a year.

Initiative category & Initiative type

Energy efficiency in production processes

Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)

1

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)

5,200

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

525,000

Payback period

4-10 years

Estimated lifetime of the initiative

6-10 years

Comment

Initiative category & Initiative type

Energy efficiency in production processes

Other, please specify

Optimization of steam supply

Estimated annual CO2e savings (metric tonnes CO2e)

111

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

Scope 1

Voluntary/Mandatory

Voluntary

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

700,000

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

1,000,000

Payback period

1-3 years

Estimated lifetime of the initiative

3-5 years

Comment

C4.3c

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

Method	Comment
Other	The most important drivers for investments in emission reduction activities is our GHG reduction targets. In Dec 2019 we signed the Business Ambition for 1.5°C pledge and hereby committed to have Net Zero

Our GHG reduction targets and climate ambitions are a strong driver for our emission reduction activities	emissions by latest 2050. In Feb 2021 we announced our new Science Based Target which was approved by Science Based Targets initiative. Both our SBT approved climate targets and our commitment to the “Business Ambition for 1.5°C” pledge, have been strong drivers for our decision about entering a Power Purchase Agreement (PPA) including additional renewable energy in the grid covering the consumption at our two Danish sites from 2022. The agreement is an agreement that runs for 7 years covering the entire electricity consumption of our two Danish sites. During 2022 we will explore our possibilities for entering similar PPA agreements in Europe and in USA covering our consumption respectively in Europe and USA. At our Italian site on-site solar panels are being installed during 2022 and the possibility for a similar solution at our French sites is being explored also in 2022.
Financial optimization calculations	Energy reductions is good business. Since 2006 we have reduced our annual energy costs by app. 25 MDKK due to reduced energy consumption. We have a procedure to continuously consider energy reductions when optimizing production and utilities, renovating, building and replacing old equipment. The signing of our Power Purchase Agreement (PPA) is apart from being driven by our climate targets also driven by financial incentives. The PPA runs for 7 years and is expected to reduce the annual electricity cost for our two Danish sites by at least 1 MDKK/year but currently more due to the latest increase in electricity prices. Also the solar panels at our Italian site is expected to reduce the annual electricity cost with app. 450,000 DKK/year due to a blocked price agreement running for 15 years. In 2020 a new innovative methodology for palladium was developed. Via a cooperative process between Lundbeck and a palladium supplier it became possible to recycle palladium leading to less CO2 emissions, less raw material consumption, less waste, improved waste sorting, reduced cost and reduced risk from metal price fluctuations due to lower consumption. The solution has been implemented in 2021 at our two chemical sites in Denmark and Italy, but not yet delivering the estimated recycling rate due to start up challenges. When fully implemented we will save app. 9.6 MDKK/year due to decreased raw material consumption and an improved agreement with a new supplier.
Partnering with governments on technology development	At our chemical site in Lumsås, Denmark we have a partnership with the Danish Technical University about optimizing production equipment for continuous production. This will result in more efficient equipment using less raw materials and less energy.

Internal incentives/recognition programs	Lundbeck uses monetary reward to managers having specific responsibility for energy savings or other activities covered by our climate target e.g. procurement activities. The reward consists of an annual bonus for meeting short term targets related to energy reduction and other activities related to our climate targets e.g. engagement with suppliers. The short-term target is created by breaking down the corporate long-term targets on GHG emission to business functions. Activities related to development of our climate target and strategy are covered by the annual bonus system. For instance, does all members of the executive management team have a target about identifying one impactful initiative to significantly reduce Lundbeck's Scope 3 emissions. The size of the bonus increases depending on degree of implementation of the initiative (partly or fully implemented). The size of the bonus is managed in our Performance Management System.
Compliance with regulatory requirements/standards	The implementation of the Directive on energy efficiency has catalysed improvements in our energy screening and mapping. This improve our possibilities for identifying even more potentials for energy savings in the future. Once a year our Danish sites are audited by an external auditor challenging our efforts on energy reducing activities and every 4 years an energy consultant prepare a screening at our Italian site and suggest initiatives to optimize the energy consumption. Lundbeck's research, development and production sites and our headquarter are all covered by our HSE system, certified according to ISO 14001 and ISO 45001. This require that HSE considerations (including energy and GHG emissions) are made every time we make investments and/or make changes. For example when old windows need to be replaced, they are replaced with low energy windows. The upcoming European sustainability reporting standards (CSRD) is also expected to push our climate agenda as it promotes ambitious targets, strong incentives like internal carbon pricing and detailed knowledge about the company's carbon footprint.
Dedicated budget for energy efficiency	Lundbeck has established dedicated teams of skilled internal engineers and maintenance employees who challenge habits and conventional thinking to identify new ways to reduce energy use. These teams have successfully identified possibilities for closing equipment when it is not in use, optimizing ventilation, temperature control etc. In 2021 the implementation of our energy projects cost 1.5 MDKK.
Internal price on carbon	We have developed a business case model for energy projects where we among other things score the CO2 reductions in a project. Currently CO2 reductions are rated higher than pay back times, increasing the

	chance for energy projects to be preferred over other projects. This is considered as an indirect carbon price because it is not an exact price, but a scoring criterion that is put on carbon emissions. In Denmark it is possible to sell our energy reductions to an energy supplier. The actual price/kWh saved energy is fixed in a contract between the energy supplier and the company. This means that when new projects are identified, typically in the Engineering department, energy savings and carbon reductions are calculated. The benefit from selling the energy reductions is included in the final calculations for the project. The pricing system means that projects with large energy reduction potentials are favored. We consider it an internal price on carbon because this structure increases the possibility for energy activities to be favored over other activities. We did not sell any energy savings in 2021, but in 2020 the energy reduction from an energy efficiency project reducing emissions by 30 tons CO2/year was sold to an energy supplier. In France it is possible to receive national grants for energy saving projects. In 2021 an investment at app. 9 MDKK for two energy projects reducing emissions with 421 tons CO2/year were covered entirely by national grants. This system makes it possible to change to energy efficient equipment at a faster pace.

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

Product or service

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

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Other

Other, please specify

Active pharmaceutical ingredient

Description of product(s) or service(s)

During 2021, a number of results have demonstrated that circularity can deliver on both resource recycling and on reducing climate emissions. Identifying the main contributors to climate emissions in the development of a chemical process for an Active Pharmaceutical Ingredient (API) is of critical importance. Here the process steps, materials and discharges can still be changed. Our Italian site has developed a model for assessing the climate emissions, while developing chemical production processes for new compounds. Many early-stage developments never reach full production scale. Therefore, the assessment method needs to be readily useful and applied every time to have effect. With the new method, our developers can calculate and compare the carbon footprint of different chemical processes. This allows them to identify the major contributors and to model the chemical process that gives the lowest footprint.

In 2021 a comprehensive analysis was done on an API synthesis developed by an external Contract Development & Manufacturing Organisation. By applying the new tool, app. 700 Kg of CO2-e/Kg of API could be saved compared to the previous synthesis. We therefore consider this a Low Carbon Product. API produced with this new synthesis will be sold on the market from 2022. Due to this the revenue share is zero in 2021.

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

Yes

Methodology used to calculate avoided emissions

Other, please specify

12 principle of the Green Chemistry, Process Mass Intensity (PMI) and the Green Aspiration Level (GAL) and GWP factors.

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

Cradle-to-gate

Functional unit used

Tons/Kg API

Reference product/service or baseline scenario used

Business as usual referring to an API synthesis developed previously by an external Contract Development & Manufacturing Organisation.

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

Cradle-to-gate

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

0.7

Explain your calculation of avoided emissions, including any assumptions

Carbon Footprint has become a standard way to evaluate any human activities and numerous values can be found in literature, but for a chemical process, it is difficult to exactly calculate because of complex interactions between contributing processes. Lundbeck have developed a simple Excel tool to calculate the greenhouse gas equivalence for a chemical process: By using a hypothesis of burning all the wastes, carbon atoms of each reagent/solvent are converted to CO2 equivalent, while nitrogen atoms are converted to N2O equivalent that is hence converted to CO2-e multiplying by the Global Warming Potential (GWP) factor of N2O and finally added together; the contribution of other atoms are considered negligible due to the low Global Warming Potential of their corresponding gases.

This tool allows to compare the Carbon Footprint of different chemical processes and to identify the major contributors of each process. Thus clarifying what activities that could give the largest CO2 reductions.
The key results were:
• Overall Process Mass Intensity was decreased from 80 Kg/Kg of API of the original process developed by an external CDMO to 57 Kg/Kg, equal to -29%
• Total solvent waste were decreased by 25%, corresponding to 720 kg for the 90 Kg batch size produced
• Total aqueous waste were decreased by 28%, corresponding to 990 kg
• Consequently, the cost of raw materials also decreased by 14 % equal to 13K€/batch saved
• GAL (Green Aspiration Level) improved from ‘good’ to ‘excellent’
• Applying the new tool, app. 700 Kg of CO2 equivalent/Kg of API could be saved corresponding to a decrease of 48%)
• Acetonitrile was identified as the major contributor of the Carbon Footprint of the entire process, which in the LUPI process was partially substituted by Ethyl Acetate.

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

0

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?

No

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 methodology	Base year has been changed for 2019, due to new approved science based target in 2021. 2019 -2021 now include company cars as a part of our Scope 1 reporting. Emissions from company car fleet was previously reported in scope 3 (Category 8: Upstream leased assets). The baseline also cover a Scope 3 calculation considering the full value chain of Lundbeck global operations (as defined by the GHG Protocol).

C5.1c

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

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	The baseline year chosen is reporting year 2019. This baseline year has been chosen as this is the most recent completed reporting year at the target submission and to ensure alignment with Lundbeck' previous footprint calculations for Scope 1 & 2. Previous emission factors for reporting 2019 emissions has been used. A general update in emission factors (scope 1 and scope 2) to align and use fewer sources. The baseline also cover a Scope 3 calculation considering the full value chain of Lundbeck global operations (as defined by the GHG Protocol). Our current CO_2 target is to: Reduce scope 1 and 2 emissions by 63% compared to 2019. Reduce scope 3 emissions by 19% compared to 2019. Reduce scope 1,2,3 by 2/3 by 2034. Have Net Zero emissions no later than 2050 .

C5.2

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

Scope 1

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

29,025

Comment

Fuel consumption for combustion and company car fleet.

Scope 2 (location-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

17,745

Comment

Location-based CO2 emission from the use of district heating and electricity.

Scope 2 (market-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

9,405

Comment

Market-based CO2 emission from the use of district heating and electricity is used in reporting our targets.

Scope 3 category 1: Purchased goods and services

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

99,375

Comment

1a: Purchased goods and services (product) = 23,675 tons CO2e
1b: Purchased goods and services (non-product) = 78,059 tons CO2e
Total: 101,734 tins CO2

Lundbeck differentiate between the purchase of product-related goods that are used in production of medicine and non-product related goods (1b) (indirect procurement).

The category 1a includes all upstream emissions from the production of product related raw materials purchased or acquired by Lundbeck. As Lundbeck is a manufacturer and purchases significant volumes of raw materials and packaging materials each year, this was identified as a high priority category at an early stage.
The emissions accounted for in Category 1 include those related to the sourcing of materials used within the pharmaceutical products as well as the manufacture. Other specific upstream emissions are separately captured in the respective Scope 3 categories.
A volume-based approach split by relevant categories of purchased goods are used to calculate emissions.

For finished goods purchased as part of the CMO relationships, a proxy finished goods emission factor was applied to these. This proxy finished goods emission factor is based on the tons of goods produced by each of Lundbeck's chemical & pharmaceutical sites and the associated emissions relating to these.

Category 1b includes emissions from all non-product-related purchases, not otherwise included in the other categories of upstream scope 3 emissions.
This is a wide category of goods and services, and can include professional services, laboratory consumables and advertising. The total spend is split by relevant categories of purchased services. Due to lack of supplier data a spend-based approach to calculate emissions is used.

Scope 3 category 2: Capital goods

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

16,533

Comment

Category 2 includes all upstream emissions associated with the production of capital goods that have been purchased within the reporting period. Capital goods are those that are treated as fixed assets or as property, plant and equipment, and are typically amortized over the life of the asset.
Goods expensed in the accounting year (i.e. operating expenditure or "Opex") are included in Category 1.
The spend-based approach to calculate emissions is used.

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

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

7,612

Comment

Category 3 includes the upstream emissions relating to the production of fuels and electricity consumed by Lundbeck, not already accounted for in scope 1&2. For all fuel-related consumption, there are associated emissions to extract gas/coal/oil etc., transport and process it before it is combusted (known as well to tank, WTT). There are also transmission and distribution (T&D) losses in supplying electricity – these emissions are accounted for in this category.
The volume/primary data-based approach to calculate emissions is used.

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

11,815

Comment

Category 4 includes emissions from all purchased (non-owned) transport and distribution services. This includes inbound logistics (from Tier 1 suppliers), transport between Lundbeck sites and outbound logistics (i.e. fulfilment of sold products, if Lundbeck has paid for/purchased the service), when paid for by Lundbeck. This includes the carbon impact of warehousing (where paid for/purchased from a third party).
This is in contrast to "Category 9 - Downstream transport & distribution" – which consists of the transport and storage of sold products when not paid for by Lundbeck.
Lundbeck have key third party logistics suppliers we work with predominantly. These suppliers provide emissions data for their activities to Lundbeck which can be used in the model (the suppliers are managed by the External Supply Chain team). Where this is not available, spend

data has been used – this approach was used for locally procured logistics services.
The volume/primary data-based approach to calculate emissions is used.

Scope 3 category 5: Waste generated in operations

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

281

Comment

Category 5 includes all emissions from the third-party disposal and treatment of waste generated by Lundbeck's owned or controlled operations.
Lundbeck have provided waste totals by tonnage for chemical and non-chemical waste as well as the waste treatment for all sites operated by Lundbeck.
The volume/primary data-based approach to calculate emissions is used.

Scope 3 category 6: Business travel

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

6,733

Comment

Category 6 includes emissions from the transportation of employees for business-related activities in vehicles owned or operated by third parties. This includes emissions that are caused due to employees travelling by air, road, rail and boat. It also includes emissions associated with hotel stays. Uplifts were applied to account for any missing data in order to cover 100% of our Business Travel activities.
The volume/primary data-based approach to calculate emissions is used.

Scope 3 category 7: Employee commuting

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

3,836

Comment

Category 7 refers to all emissions arising from the transportation of employees between their homes and their worksites. Typically, this may include emissions from: automobile, bus, rail, air and other modes of transportation. Travel for business purposes is captured in Category 6, Business Travel.
An estimation based on employees and countries travel approach is used to calculate emissions.

Scope 3 category 8: Upstream leased assets

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

955

Comment

Category 8 includes emissions associated with the operation of property or assets that are leased by Lundbeck from a third-party proprietor, and are not included in the Scope 1 and 2 inventories. This will cover renting our global sales offices if primary energy data is not available.
The spend-based approach to calculate emissions is used.

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

721

Comment

Downstream transportation and distribution covers the transport of sold finished goods to customers, only if paid for by a third party.
All inbound and outbound logistics paid for by Lundbeck are captured in Category 4. Therefore, this category captures the additional movement of Lundbeck sold products, after being sold to a third party. In Lundbeck's case, sales are made to hospitals and wholesalers. Hospitals are end customers and so no onward transport or storage accounted for under category 9 is applicable for these customers. The sales to wholesalers do include elements of downstream transportation and distribution and have been calculated as part of this category.
Given the limited information on downstream storage undertaken by customers estimations around number of days in storage have been made along with kilograms of product per pallet and the number of stacked pallets. These numbers are based on tons of goods sold by product type obtained from Lundbeck sales data.
The spend-based approach to calculate emissions is used.

Scope 3 category 10: Processing of sold products

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

6,859

Comment

Category 10 includes customer's emissions relating to the processing of intermediate products sold by the reporting company, for example the conversion of raw materials into finalized pharmaceutical products.
In the context of Lundbeck intermediate chemicals/APIs (Active Pharmaceutical Ingredients) are sold to third parties for further processing and therefore this category is included in the scope 3 inventory.

A proxy emission has been developed based on the tons of intermediate products transferred internally (from chemical to production facilities) within Lundbeck and the associated scope 1&2 emissions for the production facility sites. The proxy factor has then been applied against tons of intermediate chemicals sold externally to determine emissions for this category.

Scope 3 category 11: Use of sold products

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

Category 11 refers to emissions from the use of goods and services sold by Lundbeck to end users. The GHG protocol draws a distinction between direct and indirect use phase. Direct use phase relates to emissions from direct use of a product, e.g. electricity consumption from a lamp. Indirect use phase relates to energy associated with using a product, but not directly consumed by the product, e.g. the energy used to wash clothing. A company should report all direct use phase emissions, and may optionally report indirect use phase.

Exclusion Statement : The vast majority of Lundbeck products use no energy on consumption and any that do (e.g. IV-dosed products) were deemed to be de-minimis. Therefore this category has been excluded from the Scope 3 inventory.

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

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

567

Comment

Category 12 refers to emissions from the waste disposal and treatment of the products sold by Lundbeck at their end of life (EoL).
This would include disposal of packaging, rather than the medication itself, as generally emissions associated to this category are deemed to be minimal given the assumption that all medication will be taken by the end customer.
Averages for the end of life treatment of packaging for different countries and regions has been obtained through external research. Based on these and tons of sold goods per region data, emissions have been derived by the application of BEIS emission factors.

Scope 3 category 13: Downstream leased assets

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

Category 13 includes emissions associated with the operation of property or assets that are leased by Lundbeck to a third-party proprietor, and are not included in the Scope 1 and 2 inventories. In Lundbeck context there is some space leased out however this is extremely small and therefore deemed de-minimis.

Exclusion Statement: Category 13 has been excluded from Lundbeck Scope 3 inventory as there are no downstream leased assets.

Scope 3 category 14: Franchises

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

Category 14 includes emissions from the operation of franchises not included in scope 1 or 2. This category is applicable to franchisors, who should account for the scope 1 and 2 emissions of franchisees.
The GHG protocol defines a franchise as a business operating under a license to sell or distribute another company's goods or services within a certain location. This category is applicable to franchisors (i.e. companies that grant licenses to other entities to sell or distribute its goods or services in return for payments, such as royalties for the use of trademarks and other services).

Exclusion Statement: Category 14 has been excluded from the Scope 3 Inventory as there are no franchise relationships.

Scope 3 category 15: Investments

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

Category 15 contains all emissions associated with Lundbeck investments not already included in scope 1 and 2. These investments are most often either:

• Minority shareholdings in companies not accounted for using the accounting boundary chosen for Scope 1 and 2.

• General portfolio investments utilizing cash reserves.

Exclusion Statement: Category 15 has been excluded from the Scope 3 Inventory as there are no further investment relationships.

Scope 3: Other (upstream)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

No other upstream activities i Scope 3 not already captured in the scope 3 footprint.

Scope 3: Other (downstream)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

0

Comment

No other upstream activities i Scope 3 not already captured in the scope 3 footprint.

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)

24,689

Comment

Lundbeck have had a big structural change in our boundary used to calculate our emission in 2021.
The changes in the new boundary for Scope 1 is this:

1: CO2 emissions from company car fleet is now part of our Scope 1 emissions.
It was reported as "Category 8: Upstream leased assets" in scope 3 before, but as we do have operational control, we have moved the CO2

emission from the fleet to scope 1.
Hence our scope 1 emissions have increased a lot due to car fleet. It is about 72% of our scope 1 emissions in 2021.
Car fleet emissions have been back calculated to our baseline year 2019, and for 2020 to reflect the change in boundary and make an easy comparison going forward.

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

CO2 emission from the use of district heating and electricity.
Lundbeck have used the Scope 2 accounting method (GHG Protocol Scope 2 Guidance, January 2015).
Both the location based and the market based approach is used in our annual public reporting of CO2 emissions.

C6.3

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

Reporting year

Scope 2, location-based

15,798

Scope 2, market-based (if applicable)

7,486

Comment

CO2 emission from the use of district heating and electricity.
Lundbeck have used the Scope 2 accounting method (GHG Protocol Scope 2 Guidance, January 2015).
Both the location based and the market based approach is used in our annual public reporting of CO2 emissions.

C6.4

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

No

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)

133,337

Emissions calculation methodology

Spend-based method
Average product method

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

0

Please explain

2021:
This category includes all upstream emissions from "Cradle to gate" products purchased or acquired by Lundbeck in the baseline year.
This category includes all upstream emissions from the production of raw materials purchased or acquired by Lundbeck.
We have differentiated between the purchase of product-related goods that are sold to customers (1a), and non-product related goods (1b) (indirect procurement).

1a – Purchased Goods and Services, Product Related: Emissions related to the sourcing of materials used within the pharmaceutical products as well as the manufacture and transportation within the supply chain.
1b – Purchased Goods and Services, Non-Product Related: Emissions from all non-product-related purchases like CRO services, laboratory consumables and advertising.

1a: Purchased goods and services (product) = 23,702 tons CO2e
1b: Purchased goods and services (non-product) = 109,635 tons CO2e
Total: 133,337 tons CO2

The category cover 62% of total footprint and 73% of scope 3
Emission 2021: 133,337 tons CO2
Emission 2020: 123,589 tons CO2
Corresponds to a 7,9% increase, primarily due to increase in spend on both CRO and consultants

Calculation is based on spend data and volume data/proxy. These data are obtained in our purchasing system. No specific emission factors provided by the suppliers was used.

1a:
Are calculated based on quantity data obtained from Lundbeck which details materials purchased with their associated weight (in either tons or liters).
Materials are reviewed and a pragmatic approach is undertaken to match each item to an emission factor, most of which is derived from the Ecoinvent 3.0 database. For items where the weight is deemed to be of a low value, an average emission factor has been applied. The

pragmatic approach has aimed to cover at least 85% of each Lundbeck material group prior to applying an average emission factor. For finished goods purchased as part of the CMO relationships, a proxy is used.

1b:
Lundbeck's spend data is broken down by supplier. Focus have been put to ensure the spend data did not include items that have been accounted for using the quantity data (1a). Each spend category/supplier spend line item was allocated a relevant EEIO emission factor.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

18,039

Emissions calculation methodology

Spend-based method

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

0

Please explain

All of Lundbeck's spend data was inserted in our footprint model. Capital expenditure was identified within Lundbeck's spend data . Each spend category was allocated a relevant EEIO factor. If the category fits between two EEIO categories, then the model allows a weighted EEIO factor to be allocated to the category. All the spend categories were then multiplied by the relevant EEIO factors to calculate emissions.

The category cover 8% of total value chain and 10% of scope 3
Emission 2021: 18039 tons CO2
Emission 2020: 14401 tons CO2
Corresponds to a 25% increase, primarily due to annual purchase fluctuations determined by different needs for new equipment.
In 2021 Lundbeck invested in a lot of new projects and equipment for the production and packaging og our products and maintenance of our

site facilities.

Capital goods includes all upstream emissions associated with the production of capital goods that have been purchased within the reporting period. Capital goods are those that are treated as fixed assets or as property, plant and equipment, and are typically amortized over the life of the asset. Goods expensed in the accounting year (i.e. operating expenditure or “Opex”) is not included in this inventory - but in Category 1. Calculation is based on spend data only. These data are obtained in our purchasing system. No specific emission factors provided by the suppliers was used.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

7,116

Emissions calculation methodology

Supplier-specific method

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

100

Please explain

Emissions were calculated by multiplying fuel and electricity quantities by relevant upstream emission factors. For fuel consumption for company vehicles, not all Lundbeck locations had available data. Therefore calculations were performed by The Carbon Trust to pro-rate these quantities.
All calculations for upstream fuel and electricity emissions are shown in the model.

Key assumptions: BEIS - UK conversion factors from DEFRA database - cover the Danish and global factors.
Data Sources: Consumption data (MWh) from scope 1 and scope 2 are directly used.

The category cover 3% of total value chain and 4% of scope 3
Emission 2021: 7116 tons CO2
Emission 2020: 6474 tons CO2
Corresponds to a 10% increase, primarily due to COVID-19 restrictions lifted => less working from home, more energy used and more fleet driving.

This category includes the upstream emissions relating to the production of fuels and electricity consumed by Lundbeck, not already accounted for in scope 1 and 2. For all fuel-related consumption, as accounted for in Scope 1 and 2, there are associated emissions to extract gas/coal/oil etc., transport and process it before it is combusted (known as well to tank, WTT). There are also transmission and distribution (T&D) losses in supplying electricity – these emissions are accounted for in this category.
Lundbeck input electricity and fuel consumption data on an annual basis. These data is obtained directly from the suppliers by invoice or online meter readings. The modelling approach uses known consumption data (from the scope 1 and 2 calculations) multiplied by appropriate WTT and T&D emission factors.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

10,571

Emissions calculation methodology

Supplier-specific method
Spend-based method

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

36

Please explain

Inbound logistics:
Due to the volume and variety of purchased goods an average approach was taken to calculate these emissions from transport of goods from Tier 1 suppliers to Lundbeck. For the majority of purchased goods the Ecoinvent 3.0 database was used as the source for emission factors (EF). Ecoinvent provides EF's both with and without transport, and this difference is used to estimate the inbound logistics. For purchased materials/goods where this was not possible, average emission factors (based on the known Ecoinvent data) were used.

Purchased logistics:
Lundbeck have key third party logistics suppliers. They provide emissions data on a quarterly basis. Emission data provided by main distributors has been used directly in the model. For some third party logistics providers, emissions data was not available for the well-to-wheel (WtW) phase of activity - hence calculated assumed WtW emissions is based on the data provided by Lundbeck's other third party logistics providers. For one supplier (due to the lack of primary CO2 data) the tons of goods transported has been multiplied by the assumed average distance travelled. This has been multiplied by a BEIS 2019 emission factor to determine total emissions.
Where spend data was used (locally procured logistics), transport spend items were identified and EEIO factors applied against these. Ecoinvent 3.0 emission factors are used for the inbound logistics calculations. For purchased logistics, BEIS (DEFRA) conversion are used (if primary data from the supplier are not available) to provide the full Well to Wheel (WtW) emissions.

The category cover 5% of total value chain and 6% of scope 3
Emission 2021: 10571 tons CO2
Emission 2020: 12858 tons CO2
Corresponds to a 18% decrease, primarily due to less transportation by air (down 37%).

3807 tons CO2 was reported directly by our major outbound third party logistics providers on air, sea and road. This corresponds to 36%.
The rest of the emissions are calculated by using spend data and applying appropriate emission factors.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

275

Emissions calculation methodology

Supplier-specific method
Waste-type-specific method

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

100

Please explain

The total tonnage of waste has been provided, along the end of life treatment. Factors are applied to the different waste streams. This takes in to account the end of life treatment of the waste, as well as the waste category. The volume of waste is multiplied by the appropriate BEIS emission factor, based on disposal method and waste type (recycling, incineration, landfill, biological treatment).
Key assumptions: BEIS - UK conversion factors from DEFRA database - cover the Danish and global factors.
Data Sources: Annual HSE data in the HSE database providing an Excel – detailing tons of chemicals gone to waste across Lundbeck sites and the treatment method.

The category cover 0.1% of total value chain and 0.1% of scope 3
Emission 2021: 275 tons CO2
Emission 2020: 256 tons CO2
Corresponds to a 7.4% increase, primarily due to 10.4% more waste generated (especially chemical waste waste), as chemical production has increased by 13.0% in 2021.
However the recycling rate for general waste has improved by 6%.

This category is emissions from the third-party disposal and treatment of waste generated by Lundbeck's owned or controlled operations.
Our suppliers have provided waste totals by tonnage for chemical and non-chemical waste as well as the waste treatment method for all sites operated by Lundbeck.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

2,587

Emissions calculation methodology

Supplier-specific method
Average data method

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

83

Please explain

Business Travel includes emissions from the transportation of employees for business-related activities in vehicles owned or operated by third parties. This includes emissions that are caused due to employees travelling by air, road, rail and boat and includes also emissions associated with hotel stays.

Air travel emissions is provided by Lundbeck's travel agent CWT (covering DK, SE, NO, PL and CH) and the US travel agent. An uplift was applied to account for any missing flight data. Emissions are directly calculated for the modes of transport (distance data) and for hotels (number of nights). Hotels are rated as 4 star. Uplifts were applied to account for any missing data.
Other modes of transport (taxi and rail) that did not have distance data were estimated based on the assumption of travel undertaken by Lundbeck employees. The relevant BEIS emission factors were then applied to these.

The category cover 1% of total value chain and 1% of scope 3
Emission 2021: 2587 tons CO2
Emission 2020: 2950 tons CO2
Corresponds to a 12.3% decrease, primarily due to COVID-19 restrictions resulting in less travel activity.

Primary data cover 83% of all travels. Primary CO2 data are provided directly by the travel agents once a year in a report. They also report number of hotel nights. Employees reimbursed for driving own vehicles is also based on primary data. Uplifts were applied to account for any missing data.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

4,039

Emissions calculation methodology

Average data method

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

Please explain

Category 7 refers to all emissions arising from the transportation of employees between their homes and their worksites.

Employee number data multiplied by the average commuting emissions per person. Commuting types cover: Automobile travel, bus travel, rail travel, air travel, subway, bicycling and walking.
Average emission factors for commuting by country classification have been calculated by The Carbon Trust. These are multiplied by the total number of employees within each country. Travel for business purposes should be captured in Category 6, Business Travel.

Key assumptions: Data based on UK Office of National Statistics and US statistics data as well as further assumptions.
Average commuting data for different countries has been taken from the following and used within the model:
http://www.nationmaster.com/country-info/stats/Transport/Commute/Distance.
Data Sources: The employee numbers are provided by Lundbeck's human resources department.
BEIS emissions factors are used to calculate emissions for each method of travel.

The category cover 2% of total value chain and 2% of scope 3
Emission 2021: 4039 tons CO2
Emission 2020: 4172 tons CO2

Corresponds to a 3.2% decrease, primarily due to 229 less employees compared to 2020.

Upstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,446

Emissions calculation methodology

Spend-based method

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

0

Please explain

Category 8 includes emissions associated with operation of property where we do not have operational control or assets that are leased by Lundbeck from a third-party proprietor, and are not included in the Scope 1 and 2 inventories.

The approach undertaken has been to use Lundbeck's spend data and to apply average environmental extended input-output (EEIO) emission factors to the items relating to upstream leased assets. Only spend data is used and converted to emission data by use of EEIO emissions factors.
The complete list of spend data is used in the footprint model. Each spend category was allocated a relevant EEIO factor. If the category fits between two EEIO categories, then the model allows a weighted EEIO factor to be allocated to the category. All the spend categories were then multiplied by the relevant EEIO factors to calculate emissions.

The category cover 1% of total value chain and 1% of scope 3
Emission 2021: 1446 tons CO2

Emission 2020: 687 tons CO2
Corresponds to a 110% increase, primarily due to more office space being rented in 2021.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

876

Emissions calculation methodology

Average data method
Spend-based method

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

0

Please explain

Downstream transportation and distribution covers the transport of sold finished goods to customers, only if paid for by a third party. All inbound and outbound logistics paid for by Lundbeck are not captured in this category. Therefore, this category captures the additional movement of Lundbeck sold products, after being sold to a third party. In Lundbeck's case, sales are made to hospitals and wholesalers. Hospitals are end customers and so no onward transport or storage accounted for under category "Downstream transportation and distribution" is applicable for these customers. The sales to wholesalers do include elements of downstream transportation and distribution and have been calculated as part of this category.

Transportation: Tons of goods sold per country has been combined with country data detailing whether airfreight is used and whether delivery to an agent occurs. Estimations around average distance travelled per country and the mode of transport used have been applied.
For each county, appropriate well-to-tank (WTT) and tank-to-wheel (TTW) kgCO2e/tonne.km emission factors have been applied for each country to derive total emissions.

Warehouse storage: Tons of goods sold by product type have been obtained from the Lundbeck sales data by filtering for finished goods, trading good, Sold & SapLight. Estimations around number of days in storage have been made along with kilograms of product per pallet and the number of stacked pallets. Kilograms of product per square meter of warehouse space has been determined from the data and estimations and emissions factors applied to calculate total emissions.

Key Assumptions: Lundbeck has little data on downstream transport and warehousing not paid for by Lundbeck, so broad assumptions have been used. Estimations for onwards distances & travel modes were applied for the various countries Lundbeck sell to. Estimations for warehouse storage were applied including kilograms of goods per pallet, the stacking of pallets and the number of days goods are stored in the warehouse.

No primary data obtained by suppliers or value chain partners.

The category cover 0.4% of total value chain and 0.5% of scope 3
Emission 2021: 876 tons CO2
Emission 2020: 776 tons CO2
Corresponds to an 12.9% increase, primarily due to annual fluctuations, new product launches and 6.3% more finished goods production.

Processing of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

4,199

Emissions calculation methodology

Average product method

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

0

Please explain

This category includes customer's emissions relating to the intermediate chemicals/APIs (Active Pharmaceutical Ingredients) sold by Lundbeck to third parties for further processing. For example the conversion of APIs into finalized pharmaceutical products.

A proxy emission has been developed based on the tons of intermediate chemicals transferred internally (from chemical production facilities to pharmaceutical production facilities) within Lundbeck and the associated scope 1 and2 emissions for the production facility sites. The proxy factor has then been applied against tons of intermediate chemicals sold externally to determine emissions for this category.

The category cover 2% of total value chain and 2% of scope 3
Emission 2021: 4199 tons CO2
Emission 2020: 5547 tons CO2
Corresponds to a 24.3 decrease, primarily due to annual fluctuations in production mix and sales patterns.

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

This category refers to emissions from the use of goods and services sold by Lundbeck to end users. The GHG protocol draws a distinction between direct and indirect use phase. Direct use phase relates to emissions from direct use of a product, e.g. electricity consumption from a lamp. Indirect use phase relates to energy associated with using a product, but not directly consumed by the product, e.g. the energy used to wash clothing. A company should report all direct use phase emissions, and may optionally report indirect use phase.

Exclusion Statement: The vast majority of Lundbeck products use no energy when consumed and any that do (e.g. IV-dosed products) were deemed to be de-minims. Therefore this category has been excluded from the Scope 3 inventory.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

776

Emissions calculation methodology

Average data method

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

0

Please explain

This category refers to emissions from the waste disposal and treatment of the products sold by Lundbeck at their end of life. This would include disposal of packaging, rather than the medication itself, as generally emissions associated to this category are deemed to be minimal given the assumption that all medication will be taken by the end customer.

Averages for the end of life treatment of packaging for different countries and regions has been obtained through external research. Based on these and tons of sold goods per region data, emissions have been derived by the application of BEIS emission factors.
In Denmark, Italy & France, it is assumed that all blister packs are generally incinerated. For other countries where Lundbeck sell products to, external research has been undertaken to understand the treatment of waste.

No primary date obtained by suppliers or value chain partners.

The category cover 0.4% of total value chain and 0.4% of scope 3
Emission 2021: 776 tons CO2
Emission 2020: 654 tons CO2
Corresponds to a 18.8% increase, primarily due to 6.3% more finished goods production.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

This category includes emissions associated with the operation of property or assets that are leased by Lundbeck to a third-party proprietor, and are not included in the Scope 1 and 2 inventories.
In Lundbeck context there is some space leased out however this is extremely small and therefore deemed de-minims.

Exclusion Statement: Category 13 has been excluded from Lundbeck Scope 3 inventory as this category is de-minims.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Category 14 includes emissions from the operation of franchises not included in scope 1 or 2. This category is applicable to franchisors, who should account for the scope 1 and 2 emissions of franchisees.
The GHG protocol defines a franchise as a business operating under a license to sell or distribute another company's goods or services within a certain location. This category is applicable to franchisors (i.e. companies that grant licenses to other entities to sell or distribute its goods or services in return for payments, such as royalties for the use of trademarks and other services).

Exclusion Statement: Category 14 has been excluded from the Scope 3 Inventory as Lundbeck have no franchise relationships.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

Category 15 contains all emissions associated with Lundbeck investments not already included in scope 1 and 2. These investments are most often either:

• Minority shareholdings in companies not accounted for using the accounting boundary chosen for Scope 1 and 2.
• General portfolio investments utilizing cash reserves.

Exclusion Statement: Category 15 has been excluded from the Scope 3 Inventory as Lundbeck have no further investment relationships.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

Lundbeck do not have any significant activities regarding other upstream activities.
All relevant score 3 categories are evaluated and already covered in the CO2 inventory/footprint model.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

Lundbeck do not have any significant activities regarding other downstream activities.
All relevant score 3 categories are evaluated and already covered in the CO2 inventory/footprint model.

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	351	CO2 emission from use of biooil (by-product from the production of sunflower- and rapeseed oil) at our chemical site in Lumsås, Denmark. Source/method: Apendix II in Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions.

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

0.000001974

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

32,174

Metric denominator

unit total revenue

Metric denominator: Unit total

16,299,000,000

Scope 2 figure used

Market-based

% change from previous year

14.3

Direction of change

Increased

Reason for change

A increase of 14,3 %. This is primarily due to:

1: 6,8% more energy used - hence a higher CO2 emission (5,4%) compared to 2020.
2: Company cars now being part of our scope 1 inventory. Increase in fleet emission of 13,2% compared to 2020, due to more cars and more miles traveled.
3: 7.8% decrease in revenue compared to 2020 - hence the intensity figure increase. Had the revenue been the same in 2021 the increase would be only 5.4%.

Intensity figure in 2020 was:
30,530 tons gross global combined Scope 1 and 2 emissions
Revenue: 17,672,000,000 million DKK.
Intensity figure = 0.000001727

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	24,661	IPCC Fifth Assessment Report (AR5 – 100 year) 💬1
HFCs	28	IPCC Fifth Assessment Report (AR5 – 100 year) 💬2

💬1Emission factors originates from DEFRA 2020.

💬2HCFCs (Refrigerants) used:
R-404A: GWP 3300 kg CO2/kg
R-134a: GWP 1300 kg CO2/kg
R-407C: GWP 1600 kg CO2/kg

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Denmark 💬1	3,034
Italy 💬2	2,570
France 💬3	888

United States of America [4]	315
Poland [5]	0
Other, please specify Global - total CO2 emission from company cars [6]	17,881

[1] Gasoil, biooil, emergency diesel, city gas, LPG, HFCs

[2] Methane

[3] Methane

[4] Methane for La Jolla and Seattle sites

[5] No scope 1 emissions in Poland as the affiliate use only electricity and district heating - both reported in scope 2.

[6] Company cars is not calculated by country or region but on a global scale. We have primary date from 41% of our fleet and uplift to cover 100% by assumptions on the remaining part.

Car fleet: Emissions are based on direct reports from leasing companies. Available information on company cars from USA, Canada, Denmark, Italy, France, Spain, Portugal. This corresponds to about 43% of the total number of cars on a corporate level (primarily used by our managers and sales force locally in 55 countries).
The total emission is extrapolated to cover 100%. Calculations are made on consumption data directly from our leasing companies on an annual basis or the amount of fuel used from our leasing partner and make a calculation to CO2 emission. We strive to reduce emissions by using more fuel efficient cars or a different type of fuel, using newer car models, EVs, hybrid cars or reducing the number of leased cars. New Company Car policy and roadmap for US fleet transition to 100% EV in 2035.

C7.3

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

By facility
By activity

C7.3b

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

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Site Valby, Denmark	1,473	55.658035	12.516765
Site Lumsås, Denmark	1,561	55.94317	11.512057
Site Padova, Italy	2,570	45.410201	11.926138
Site Elaiapharm, France	888	43.628082	7.051954
Affiliate - La Jolla, USA	98	32.902291	-117.236373
Affiliate - Seattle, USA	217	47.763859	-122.181455
Affiliate - Deerfield, USA	0	42.165547	-87.879638
Affiliate - Krakow, Poland	0	50.087748	19.976176
Company cars - Global	17,881	0	0

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Biooil	351
Methane	3,774
Gasoil	193

F -gas (LPG)	988
Town gas	1,458
HFC (R134a)	28
Emergency diesel for generators	16
Company cars - Global	17,881

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Denmark [1]	10,760	3,874
Italy [2]	2,393	1,898
France [3]	306	71
United States of America [4]	1,728	1,060
Poland [5]	611	582

[1] Purchased and consumed low-carbon electricity and heat in Denmark: Originates from grid mix of electricity and grid mix of district heating. 80% of the electricity originates from renewable
energy sources (wind mills, solar, water, biogas). 79% of the fuel used for generating district

heating originates from biofuels (hay, biomass, organic waste, wood pellets). Self generated: Steam is made by use of town gas. Cooling by use of electricity.

[2]Purchaced electricity only. Self generated: Steam and heat is made by use of methane. Cooling by use of electricity. 19,81% renewable electricity in the grid.

[3]Purchaced electricity only. Self generated: Steam and heat is made by use of methane. Cooling by use of electricity. 7.1% renewable electricity in the grid.

[4]La Jolla: Purchaced electricity only. Self generated heat is made by use of methane.
Cooling by use of electricity. 20% renewable electricity in the grid.

Seattle: Purchaced electricity only. Self generated heat is made by use of methane.
Cooling by use of electricity. 20% renewable electricity in the grid.

Deerfield: Purchaced electricity only. Self generated heat and cooling is made by use of electricity.
20% renewable electricity in the grid.

[5]Purchased and consumed electricity and heat (district heating). Self generated cooling by use of electricity. 16,9% renewable electricity and 10,4% renewable district heating in the grid respectively.

C7.6

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

By facility
By activity

C7.6b

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

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Site Valby, Denmark Purchased and consumed low-carbon electricity and heat. Originates from grid mix of electricity and grid mix of district heating. 80% of the electricity originates from renewable energy sources (wind mills, solar, water, biogas). 85% of the fuel used for generating district heating originates from biofuels (hay, biomass, organic waste, wood pellets). Self generated: Steam is made by use of town gas. Cooling by use of electricity.	8,193	3,025
Site Lumsås, Denmark Purchased and consumed low-carbon electricity. Originates from grid mix of electricity. 80% of the electricity originates from renewable energy sources (wind mills, solar, water, biogas). Self generated: Steam is made by use of biooil. Cooling by use of electricity.	2,567	849
Site Padova, Italy Purchaced electricity only. 19.81% of the electricity originates from renewable energy sources. Self generated: Steam and heat is made by use of methane. Cooling by use of electricity.	2,393	1,898
Site Elaiapharm, France Purchaced electricity only. 7.1% of the electricity originates from renewable energy sources. Self generated: Steam and heat is made by use of methane. Cooling by use of electricity.	306	71

Affiliate - La Jolla, USA Purchaced electricity only. Self generated heat is made by use of methane. Cooling by use of electricity. 20% renewable electricity in the grid.	337	142
Affiliate - Seattle, USA Purchaced electricity only. Self generated heat is made by use of methane. Cooling by use of electricity. 20% renewable electricity in the grid.	584	257
Affiliate - Deerfield, USA Purchaced electricity only. Self generated heat and cooling is made by use of electricity. 20% renewable electricity in the grid.	807	661
Affiliate - Krakow, Poland Purchased and consumed electricity and heat (district heating). Self generated cooling by use of electricity. 16,9% renewable electricity and 10,4% renewable district heating in the grid respectively.	611	582

C7.6c

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Purchased electricity	14,157	6,386
Purchased district heating	1,641	1,100

C7.9

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

Increased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	54	Decreased	0.2	The change in emissions in renewable energy is due to change in the use of biooil. Biooil: A by-product from the production of sunflower- and rapeseed oil and used for heat/steam at Site Lumsås, Denmark. 12205 MWh biooil was used in 2021 compared to 11800 MWh in 2020. As 405 MWh more biooil was used in 2021, this consequently saved the use of gasoil. Compared to 2020 the use of gasoil (Mwh) decreased by 26% and the use of biooil (MWh) increased by 3.4%. If the sum of biooil + gasoil is calculated together the CO2 emission have decreased by 9% (54 tons of CO2) from 2020 to 2021, as less gasoil have been used in 2021. This corresponds to 0.2% reduction (rounded up from 0.177). Formula: ((-54/30530)*100) = -0.2 ((change in scope 1+2 emissions attributed change in renewable energy consumption)/(previous year scope 1+2 emissions)*100).

Other emissions reduction activities	533	Decreased	1.7	The change in emissions due to other reduction activities is attributed to proactive emission reduction initiatives at our production sites. In 2021 Lundbeck implemented several energy conserving initiatives. These initiatives were based on a 1.5 MDKK investment. Energy efficiency in production: We optimized compressed air supply and steam supply. Energy efficiency in buildings: We optimized motors, drives and installation of new chillers. Total decrease in CO2 due to energy reducing projects is: 533 tons CO2. This corresponds to 1.7 % reduction. Formula: ((-533/30530)*100) = -1.7 ((change in scope 1+2 emissions attributed to other emission reduction activities)/(previous year scope 1+2 emissions)*100).
Divestment	0	No change	0	NA
Acquisitions	0	No change	0	NA
Mergers	0	No change	0	NA
Change in output	972	Increased	3.2	The change in emissions due to change in output is attributed to 6,3 % more finished goods production in 2021 compared to 2020. Additionally Chemical Production used more production hours due to different production mix as well as extraordinary maintenance of RTO, burner for boilers, Wastewater Treatment Plant and cooling system. This combined resulted in more energy used. An extra 6877 MWh (6.8%) was consumed in 2021 compared to 2020. A total of 972 tons CO2. This corresponds to 3.2% increase. Formula: ((972/30530)*100) = 3.2% ((change in scope 1+2 emissions attributed to

				other emission reduction activities)/(previous year scope 1+2 emissions)*100).
Change in methodology	1,510	Decreased	4.9	The change in emissions due to change in methodology is primarily attributed to change in emission factors (the increasing part of sustainable energy in the grid: electricity and district heating). However, the total change from 2020 to 2021 was 1712 tons more CO2 emitted (5.6%). 30530 tons of CO2 in 2020 and 32174 tons CO2 in 2021. This is mostly due to increase in company car emissions that alone corresponds to a 2091 tons increase in 2021. If company cars is not included and had 2020 emission factors been used for scope 1 and 2, the decrease would have been 1510 tons , due to the more beneficial emission factors in 2021. Formula: ((-1510/30530)*100) = - 4.9% ((change in scope 1+2 emissions attributed to change in methodology)/(previous year scope 1+2 emissions)*100).
Change in boundary	2,091	Increased	6.8	The change in boundary due to company cars now being part of our scope 1 inventory in 2021. However baseline (2019) and 2020 data has been adjusted with the applicable emission data for company car fleet in scope 1. This results in no actual change in boundary in 2021, as it has been back calculated to reflect baseline year. However company cars emissions corresponds to 72% of our new scope 1 inventory. This part play a huge role in our annual change in emission. In 2021 13.2 % more CO2 (2091 tons) was emitted from company cars compared to 2020. This is primarily due to more cars and more km driven. This corresponds to 6.8% increase. Formula: ((2091/30530)*100) = 6.8 ((change in scope 1+2 emissions attributed to other emission reduction activities)/(previous year scope 1+2 emissions)*100).

Change in physical operating conditions	0	No change	0	NA
Unidentified	672	Increased	2.2	Total increase in CO2 emission from 2020 to 2021 was 5.4%. 3.2% is accounted for in the above. The difference (5.6-3.2) is a 2.2% increase and is not identified. This corresponds to 672 tons of CO2. Formula: ((672/30530)*100) = 2.2% ((change in scope 1+2 emissions not identified)/(previous year scope 1+2 emissions)*100). This is partly due to fluctuations in our annual production mix and other elements not accounted for in the above. However we find it difficult to pin-point the actual reason for this unidentified emission.
Other	0	No change	0	NA

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 0% but less than or equal to 5%

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	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	12,205	37,334	49,539
Consumption of purchased or acquired electricity		23,490	19,864	43,354
Consumption of purchased or acquired heat		12,875	2,272	15,147
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		48,570	59,470	108,040

C8.2b

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

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

12,205

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

4,882

MWh fuel consumed for self-generation of steam

7,323

Comment

Biooil (by-product from the production of sunflower- and rapeseed oil). Used for production of heat and steam in Site Lumsås, Denmark. 60% for generation of steam and 40% for generation of heat.

Other biomass

Heating value

Unable to confirm heating value

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

NA

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Unable to confirm heating value

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

NA

Coal

Heating value

Unable to confirm heating value

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

NA

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

813

MWh fuel consumed for self-generation of electricity

61

MWh fuel consumed for self-generation of heat

300

MWh fuel consumed for self-generation of steam

452

Comment

Diesel: Used for emergency generators producing electricity at site Valby.

Gasoil: Used as backup fuel for biooil at Lumsås, Denmark. 60% for generation of steam and 40% for generation of heat.

Gas

Heating value

LHV

Total fuel MWh consumed by the organization

36,521

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

18,260.5

MWh fuel consumed for self-generation of steam

18,260.5

Comment

LPG: Used for production of heat and fueling our RTO burner at site Lumsås.
Methane/Natural gas: 50% for heat and 50% for steam.
Used at our production sites in Valbonne, France and Padova, Italy as well as our affiliates in Seattle, USA and La Jolla, USA.

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

Heating value

Unable to confirm heating value

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

NA

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

49,539

MWh fuel consumed for self-generation of electricity

61

MWh fuel consumed for self-generation of heat

23,442.5

MWh fuel consumed for self-generation of steam

26,035.5

Comment

24.6% of the combusted fuels originates from renewable sources in 2021.
Se above fuel types for details.

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	61	61	0	0
Heat	23,442.5	23,442.5	4,882	4,882
Steam	26,035.5	26,035.5	7,323	7,323
Cooling	13,006	13,006	7,049	7,049

C8.2e

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

Sourcing method

None (no active purchases of low-carbon electricity, heat, steam or cooling)

Energy carrier

Low-carbon technology type

Country/area of low-carbon energy consumption

Tracking instrument used

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

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

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

Comment

Electricity: Purchased and consumed low-carbon electricity originates from grid mix. As an example, in Denmark 80% of the electricity in 2021 originates from renewable energy sources (wind mills, solar, water, biogas). Lundbecks average global share of green energy from electricity is 54.2% in 2021.

District heating: Purchased and consumed low-carbon heat in Denmark originates from grid mix in district heating. 85% of the district heating in 2021 originates from renewable energy sources (hay, biomass, organic waste, wood pellets).

In parallel, we are accelerating the transition to renewable energy in our manufacturing and headquarter facilities. The main elements are changing our energy sources to renewable electricity or other renewable fuels, primarily using Power Purchasing Agreements (PPA). A new solar park built following an agreement between Lundbeck and the energy provider Better Energy which will of January 2022, more than cover Lundbeck's electricity consumption in Denmark. Hence by next reporting year emissions from electricity used in Denmark will be 0.

C8.2g

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

Country/area

Denmark

Consumption of electricity (MWh)

25,079

Consumption of heat, steam, and cooling (MWh)

14,819

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

39,898

Country/area

Italy

Consumption of electricity (MWh)

7,070

Consumption of heat, steam, and cooling (MWh)

0

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

7,070

Country/area

France

Consumption of electricity (MWh)

7,085

Consumption of heat, steam, and cooling (MWh)

0

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

7,085

Country/area

Poland

Consumption of electricity (MWh)

308

Consumption of heat, steam, and cooling (MWh)

328

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

636

Country/area

United States of America

Consumption of electricity (MWh)

3,812

Consumption of heat, steam, and cooling (MWh)

0

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

3,812

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

5,549

Metric numerator

Tonnes of solvents recovered

Metric denominator (intensity metric only)

NA

% change from previous year

24

Direction of change

Decreased

Please explain

Over the years, Lundbeck have refined the skills and technical capabilities of our chemical production to increase recycling of organic solvents and reduce hazardous waste. We set targets each year to improve and in 2021, we are proud to report that we achieved the corporate target of internal recycling 60% of the solvents used in chemical production. In 2021 we manage to recover 65 % - hence exceeding our target.

In 2021 Lundbeck recovered 5549 tons solvents. Consequently saved CO2 from additional resources used for external production, transportation and waste management. All solvents used in chemical production is in scope. Both solvents recovered on-site (internal recovery) and by external companies (external recovery). The actual amount in tons recovered in 2021 is less than in 2020, due to less use of solvents (3.5%) in the production in 2021.

Our target for 2022 is to recycle 63% of the solvents used in chemical production (in Denmark and Italy).

Description

Energy usage

Metric value

351

Metric numerator

Tons CO2 from liters of biooil consumed

Metric denominator (intensity metric only)

NA

% change from previous year

3.8

Direction of change

Increased

Please explain

Biooil: Reduced CO2 emission by using biooil (by-product from the production of sunflower- and rapeseed oil). Biooil is used for heat/steam in Site Lumsås, Denmark.
3,4% more biooil was used in 2021 compared to 2020. The increase is due to 26% less gasoil used in 2021, as biooil is our preferred type of

fuel. By using more biooil and less gasoil we reduce the emission of CO2, as biooil have a 9 times lower emission factor.
If the sum of biooil + gasoil is calculated the CO2 emission have decreased by 9% (54 tons of CO2) from 2020 to 2021, as less gasoil have been used in 2021.
The emission factors are from DEFRA 2020: Biooil 0,0288 tons CO2 pr. MWh. Gasoil: 0,25676 tons CO2 pr. MWh.

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

Lundbeck 2021 - CDP verification template PwC completed.pdf

Sustainability_Report_2021_web_final.pdf

Page/ section reference

1: Verification from PwC. See page 1-2. Attachment: "Lundbeck 2021 - CDP verification template PwC completed"

2: Sustainability Report. See page 40-41. Attachment: Lundbeck_Sustainability_Report_2021_WEB_upd.pdf

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

Lundbeck 2021 - CDP verification template PwC completed.pdf

Sustainability_Report_2021_web_final.pdf

Page/ section reference

1: Verification from PwC. See page 1-2. Attachment: "Lundbeck 2021 - CDP verification template PwC completed"

2: Sustainability Report. See page 40-41. Attachment: Lundbeck_Sustainability_Report_2021_WEB_upd.pdf

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: Upstream transportation and distribution

Scope 3: Business travel

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

Lundbeck 2021 - CDP verification template PwC completed.pdf

Sustainability_Report_2021_web_final.pdf

Page/section reference

1: Verification from PwC. See page 1-2. Attachment: "Lundbeck 2021 - CDP verification template PwC completed"

2: Sustainability Report. See page 40-41. Attachment: Lundbeck_Sustainability_Report_2021_WEB_upd.pdf

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
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ISAE3000	2021: 32174 CO2e. 2020: 30530 tons CO2e MWh. Change: 5.4 % increase compared to 2020. Reason: Scope 1 up by 12.0 % (due to increase in gas consumption and fuel for company car fleet). Scope 2 down by 11.6 % due to lower emission factors in 2021). PwC has included Scope 1, Scope 2 and Scope 3 (Purchased goods and services, Up-stream transportation and distribution, business travel), in our verification statement, but not the year on year movements in CO2 emission as these were not included within the assurance scope of the statement. However, this was verified in the annual data assuring process and validation by PwC prior to launch of our Suatainability Report 2021. The change is reported in our annual Sustainability report page 40-41. Attachment: Lundbeck_Sustainability_Report_2021_WEB_upd.pdf Verification from PwC. See page 1-2. Attachment: "Lundbeck 2021 - CDP verification template PwC completed" 1, 2
C8. Energy	Energy consumption	ISAE3000	2021: 108040 MWh. 2020: 101165 MWh. Change: 6.8 % increase compared to 2020. Reason for increase is primarily due to cold weather, need for extra ventilation during Covid-19 lockdown and running a new RTO (Regenerative Thermal Oxidizer). PwC have included Scope 1, Scope 2 and Scope 3 (Purchased goods and services, Up-stream transportation and distribution, business travel), in our verification statement, but not the year on

			year movements in energy as these were not technically included within the assurance scope for the statement. However, this is verified in the annual data assuring process and validation by PwC prior to launch of our Suatainability Report 2021. The change is reported in our annual Sustainability report page 40-41. Attachment: Lundbeck_Sustainability_Report_2021_WEB_upd.pdf 2

[1]Lundbeck 2021 - CDP verification template PwC completed.pdf

[2]Sustainability_Report_2021_web_final.pdf

C11. Carbon pricing

C11.1

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

Yes

C11.1a

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

Denmark carbon tax

France carbon tax

C11.1c

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

Denmark carbon tax

Period start date

January 1, 2021

Period end date

December 31, 2021

% of total Scope 1 emissions covered by tax

6

Total cost of tax paid

581,516

Comment

In Denmark where our headquarter site and one of our chemical sites are located the government have just suggested a new taxation system for decision. This will change the existing taxation system from an energy tax to a CO2 tax thus promoting the use of renewable energy. Implementation is expected to be in 2022. Expected cost is 2.3 MDKK/year.

France carbon tax

Period start date

January 1, 2021

Period end date

December 31, 2021

% of total Scope 1 emissions covered by tax

4

Total cost of tax paid

302,913

Comment

In France we are covered by two carbon tax system based on the "polluter pays" principle. The tax is levied directly on the purchase of energy (gas, petrol, electricity, etc.). Basically, all energy buyers pay this tax.

The tax name for gas is “TICGN or “Taxe Intérieure sur Consommation de Gaz Naturel”. The price is 8.41 €/MWh and in 2021 we payed 302,913 DKK

We also pay a tax for electricity: Contribution au Service Public d’Electricité . The price is: 0.05000 cEuro/kWh . This means in 2021 we payed: 2,641 DKK

C11.1d

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

Lundbeck wants to be a responsible company and comply with existing and future legislation. As a part of our corporate Health Safety and Environment (HSE) system, that are certified according to the international ISO 14001 standard, we have implemented a firm monitoring and compliance strategy to assure compliance with new and upcoming legislation. The strategy is described in the manual for the system and implemented locally in the HSE departments at our sites in Denmark, Italy and France. The strategy requires that all sites have a set procedure to monitor national legislation on a quarterly basis. In addition, the Corporate HSE department is also required to monitor EU legislation. Lundbeck's energy consumption is too small to be covered by EU's ETS scheme, but we are covered by national legislations on carbon taxes.

CASE STUDY: Carbon tax is currently a part of the legislation in Denmark and France. The Danish carbon tax is included in our energy invoices and payed automatically together with these invoices. In Denmark where our headquarter site and one of our chemical sites are located the government have just suggested a new taxation system for decision. This suggestion will increase the CO2 tax for our Danish sites to app. 2.3 MDKK/year thus promoting the use of renewable energy. Hence, we are looking into a future with increasing cost for use of fossil-based fuels.
In France we are covered by two carbon tax system based on the "polluter pays" principle. The tax is levied directly on the purchase of energy (gas, petrol, electricity, etc.). Basically, all energy buyers pay this tax. The name for gas is “TICGN or “Taxe Intérieure sur Consommation de Gaz Naturel” and for electricity: Contribution au Service Public d’Electricité.

Several scenarios like IEA NZE 2050 predict that carbon taxes will increase and will be introduced in more countries. Our strategy to minimize the impact from increasing carbon price schemes is included in our climate strategy and aligned with our 1.5C aligned climate target. We seek to move

away from fossil based fuels to renewable fuels. 11 years ago we replaced a large boiler using fuel oil with a new boiler using bio oil at our chemical site in DK. This reduced our CO2 emissions by app. 2000 ton/year. We are currently experiencing limited supply of biooil and expect to be forced to go back to fossil fuels at our DK chemical site by June 2022. Going forward the strategy will be to favor electrical boilers compared to fossil fuel boilers due to supply security. In 2022 we will prepare a business case for our headquarter site for converting our existing fossil fuel boiler to an electrical boiler. The result will create basis for deciding the timeline for installing an electrical boiler at this site but also be included in the further evaluation of possibilities for electrical boilers at our other production sites in 2023. Conversion to electrical boilers will eliminate our use of fossil fuels and enable us to use renewable electricity, thus avoid carbon taxes.

Additionally we are moving away from fossil based electricity to electricity based on renewables e.g. we signed a Power Purchase Agreement by the end of 2020, which will supply our two Danish sites with electricity from a new solar park from January 2022 and 7 years ahead. In Dec 2022 we hope to be able to sign a PPA running for 10 years that can supply all our European sites incl. sales offices. Additionally, we will install on-site solar panels at our Italia site in June 2022 and we will explore our possibilities for a similar solution at our French site. We believe this transition make us resilient towards new and increasing carbon pricing schemes.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

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

Objective for implementing an internal carbon price

Drive energy efficiency

GHG Scope

Scope 1
Scope 2

Application

In Denmark it is possible to sell our energy reductions to an energy supplier. The actual price/kWh saved energy is fixed in a contract between the energy supplier and the company. This means that when new projects are identified energy savings and carbon reductions are calculated and sold to the energy supplier. The benefit from selling the energy reductions is included in the final calculations for the project thus establishing a pricing system that favor projects with large energy reductions. We did not sell any energy savings in 2021, but in 2020 the energy savings from a project reducing emissions by 30 tons CO2/year was sold.
In France it is possible to receive national grants for energy saving projects, making it possible to implement energy projects earlier than otherwise. At our French site, it is the Engineering department that identify and implement energy projects. In 2021 two energy projects reducing CO2 emissions by 421 tons were financed by national grants (App. 9 MDKK).

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

4,550

Variance of price(s) used

The stated actual price is based on the system in Denmark. The price is defined by the supplier. We did not sell any savings in 2021, but in 2020 the sum provided was 300 DKK/MWh saved corresponding to 4,550 DKK/ton CO2 saved.
In France they received national grants in 2021 corresponding to 23,544 DKK/ton CO2 saved.

Type of internal carbon price

Internal trading
Implicit price

Impact & implication

Internal trading:
In Denmark the benefit from selling the energy reductions is included in the final calculations for the project. We consider it as an internal price on carbon because this structure increases the possibility for energy activities to be favored over other activities because a projects payback

time has large influence on a projects possibility for being implemented. We did not sell any energy savings in 2021 but in 2020 we sold energy savings from a project regarding heat recovery from a main compressed air plant. The heat that is generated will now be used to prime the supply of district heating.

In France the possibility for national grants also influence the decision-making process and planning of projects to be implemented. In 2021 two energy projects were implemented due to the provided national grants at app. 9 MDKK reducing emissions with 421 tons CO2/year .

In both cases our strategy about using the national systems for receiving support and grants to energy efficiency projects have large influence on the identified energy projects chances for being approved and implemented.

Indirect carbon (implicit) price:
In addition to our strategy with using national support/grant systems we use CO2-scoring as an integrated and mandatory factor to be considered when assessing new energy and other improvement projects. We have developed a business case model for projects where we among other things score the CO2 reductions in a project. Currently CO2 reductions are rated higher than pay back times, increasing the chance for energy projects to be preferred over other projects. This is considered as an indirect carbon price because it is not an exact price, but a scoring criterion that is put on carbon emissions. The model is used for all energy projects at our production sites.

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, other partners in the value chain

C12.1a

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

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

Other, please specify

Collect information about climate targets and use of renewable energy

% of suppliers by number

1

% total procurement spend (direct and indirect)

19

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

22

Rationale for the coverage of your engagement

Our engagement strategy is based around the 3 scope 3 categories that are included in our science-based target (Purchased goods and services, Upstream transportation and Distribution and Business travel), representing 76% of all scope 3 emissions. Our target is to reduce 19% of scope 3 emissions in our target scope.

In 2021 the first step in our supplier engagement was to receive emission data (scope 1, 2 and 3) and information about climate targets and use of renewables from our largest and strategic suppliers and partners. We engaged with:

- All suppliers within distribution of our products
- All suppliers within our Contract Manufacturing Organizations and the largest suppliers within Contract Research Organizations (All within category 1: Purchased goods and services)
- Suppliers within Business travel covering 80% of all travel activity.

In total 44 suppliers.

Next step in 2022 is to submit a survey to a larger group of app. 500 suppliers and partners with spend more than 200.000 USD gathering

information about electricity consumption, targets and use of renewable electricity. This will increase the percentage of supplier-related scope 3 emissions that are attributable to participate in the survey to 46%. By the end of 2022 we will start to submit amendments to the existing contracts to suppliers within category 1: Purchased goods and services. The amendment include requirements about delivering annual emission data and using renewable electricity for the products they supply to Lundbeck. In 2021 one supplier had this requirement included in the contract.

Impact of engagement, including measures of success

Our engagement concerning retrieving emissions data from our suppliers and partners has been crucial in order to improve data quality from spend or volume based calculations to actual supplier specific emission data. The currently received supplier data in category 1 show that if all these suppliers use renewable electricity the emissions in this category will drop with at least 40% and constitute a 39% reduction in our scope 3 science based target and a 29% reduction of our total scope 3 inventory (all categories). A significant contribution to our current science based target on 19% emission reduction and an important step towards our long term ambition of Net Zero emissions in 2050 at the latest.
Success will be measured as:
- Number of suppliers we receive emission (scope 1, 2, and 3) data from: In 2021 we engaged with 44 suppliers and received data from 19 and have verbal agreements with 15 more about delivering emission data by summer 2022. The success criterion is to receive emission data from all 44 suppliers during 2022.
- Percentage of suppliers and partners responding to the survey that will be send in 2022 to a larger group of app. 500 suppliers with spend more than 200.000 USD. Success criterion is a response rate at 50%.
-Percentage of signed amendments with requirements about delivering data and use renewable electricity within the target group. Success criterion will be defined when we have the results from the large survey, but the minimum success criterion will at least be to achieve a 19% emission reduction through this initiative corresponding to our scope 3 target.

Comment

We have developed an excel tool to gather climate targets and emission data from suppliers which is used for our largest and strategic suppliers. 1% of all suppliers and partners by number (currently 44 suppliers) increasing to app 2% during 2022. As the amount of supplier data increases we will consider using externally established systems like CDP, Ecovadis, PSCI or similar platforms to gather emissions data.

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Other, please specify

Provide training in carbon footprint calculation and explore possibilities for carbon reductions withi the products and services Lundbeck receive e.g using thinner carton for packaging

% of suppliers by number

1

% total procurement spend (direct and indirect)

13

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

9

Rationale for the coverage of your engagement

Our supplier engagement strategy is based around the 3 scope 3 categories that are included in our science-based target (Purchased goods and services, Upstream transportation and Distribution and Business travel), representing 76% of all scope 3 emissions. Our target is to reduce 19% of scope 3 emissions in our target scope.

This engagement incl. training in carbon footprint calculations and exploring possibilities for carbon reductions was rolled out as part of the information collection campaign. We engaged with our two largest suppliers within Contract Research Organizations and our three largest suppliers within Contract Manufacturing Organizations (All within category 1: Purchased goods and services). The purpose of the initiative was to receive transparent emission data and to learn how to achieve the largest reductions within these two supplier categories. At the same time we tested and improved our own developed tool to gather climate targets and emission data from our suppliers. Following have we used the tool for gathering emission data from a larger group of suppliers.

Impact of engagement, including measures of success

Our engagement initiative with training in carbon footprint calculations and exploring possibilities for carbon reductions has been crucial in order to create transparency within supplier emission data and to improve data quality from spend or volume based calculations to actual supplier specific emission data. It has also contributed to improvement of our emission data gathering tool, so we have been able to send it to a larger group of suppliers.

We have increased knowledge about how emissions can be reduced within the two categories of suppliers and thus created the foundation for

the decision about requiring suppliers with a spend at more 200.000 USD to use renewable electricity for the products and service they provide to Lundbeck. The received supplier data show that if all these suppliers use renewable electricity the emissions in this category will drop with at least 40% and constitute a 39% reduction in our scope 3 science based target and a 29% reduction of our total scope 3 inventory (all categories). A significant contribution to our current science based target on 19% emission reduction and an important step towards our long term ambition of Net Zero emissions in 2050 at the latest.
It has also given us an important input for future design of our clinical studies as we have been presented for how a study can be performed with much less travels. Emissions related to travel constitute 30 - 40% of the emissions from clinical studies and present an area for potential large emission reductions.

Measure of success:
We had planned to engage with 5 strategic and large suppliers and we have engaged with all 5.

Comment

C12.1d

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

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

Purchasing renewable energy

Description of this climate related requirement

Currently 1 supplier have signed an amendment with climate requirements:
- Within 2025 use 100% renewable energy when packaging products delivered to Lundbeck
- On a yearly basis deliver CO2 emissions report from the products delivered to Lundbeck (Scope 1 + 2)
- Continuously thrive to develop and supply secondary / tertiary packaging components that are recyclable

The supplier is new and will start to deliver products to Lundbeck in 2022, therefore we have no spend in 2021 to this supplier. During 2022 an amendment with similar requirements will be sent to a larger pilot group of suppliers expanding to a larger group of app. 500 suppliers with spend more than 200.000 USD during the next 1 - 3 years.

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

56

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

0

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment

Other, please specify

Supplier must document electricity consumption ad show certificates for renewable energy

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

Retain and engage

Climate-related requirement

Climate-related disclosure through a non-public platform

Description of this climate related requirement

Our supplier engagement strategy is based around the 3 Scope 3 categories that are included in our target (cat 1: Purchased goods and services, cat. 4: Upstream transportation and Distribution and cat. 6: Business travel), representing 76% of all scope 3 emissions. The first step in 2021 have been to engage with 44 suppliers and make verbal agreements about annual emission data (scope 1, 2 and 3), information about climate targets and use of renewables. We have engaged with all 44 suppliers and received data from 19 suppliers and expect to receive data from at least 15 more during 2022. The dialogue with the suppliers have been planned in cooperation between category managers from the procurement department, responsible key persons in the organization and the Corporate Health, Safety and environment dep.
Our engagement concerning retrieving emissions data from our suppliers has been crucial in order to improve data quality from spend or volume based calculations to actual supplier specific emission data.
Next step in 2022 will be to send a survey requesting information about electricity and targets from app. 500 suppliers with spend more than 200.000 USD and second include requirements about use of renewable electricity in the written contracts.
The currently collected emission data show that if all suppliers in cat. 1 use renewable electricity the emissions in this category will drop with at least 40% corresponding to a 39% reduction in our scope 3 science based target.

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

76

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

13

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

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

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

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)

Linkedin_Lundbeck_SBT: Lundbeck was selected to be part of a social media campaign on corporate climate action run by the Science Based Targets initiative, Business Ambition for 1.5C and Global Compact.

Press release SBTi target: Announcement of our science based target

Climate action day: Commitment to climate action

Position on climate action: Public document with our position on climate action

Linked in the 9th September: Commitment to Science based targets and a call to others about taking action

Press release SBTi target.pdf

Linked in the 9th September 2021.pdf

Climate action day.PNG

Climate Change Position_final.pdf

Linkedin_Lundbeck_SBTi.jpg

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

It is described in Lundbeck's HSE management system how internal and external communication is coordinated in the company. Lundbeck's HSE management system is certified according to ISO 14001 and ISO 45001 and in compliance with Art. 8 in DIRECTIVE 2012/27/EU.

All communication with policy makers, authorities, trade associations and participation in other networks is coordinated and agreed between the Executive Vice President of Product Development & Supply (C-Suite Officer), the Corporate HSE department, Corporate Compliance & Sustainability and the Corporate Communication department. When needed our CEO is involved, typically when we decide to sign new ambitions or statements. Only the Corporate Communication department can prepare press releases, corporate news at our homepage or other

social media announcements, but the content is always confirmed with Corporate Compliance & Sustainability, the Corporate HSE department and our Executive Vice President of Product Development & Supply.
Preparation of input to upcoming legislation, participation in networks or climate seminars is performed by managers and employees from the Corporate HSE department. Lundbeck's Corporate HSE department is responsible for developing and managing Lundbeck's Climate strategy and for the follow up on all Lundbeck's climate initiatives and targets. This means that it is the same managers and employees that are responsible for the climate strategy, that participate in the network activities and the commenting on new legislation. This ensures consistent communication about our climate strategy.
When Lundbeck participate in interviews with external journalists concerning climate issues it is usually performed by our Executive Vice President of Product Development & Supply or our Compliance & Sustainability officer and clarified with the Corporate HSE department and the Corporate Communication department. Occasionally other managers referring to our Executive Vice President of Product Development & Supply participate in interviews and again it is approved by our Executive Vice President of Product Development & Supply and coordinated with the Corporate HSE department.
The internal communication concerning climate issues is coordinated and performed by the Corporate Compliance & Sustainability or the Corporate HSE department and in some cases the Corporate Communication department.

C12.3a

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

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

Circular economy

Other, please specify

Charge on excess heat

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

Energy Agreement of 29 June 2018 relating to surplus heat, Agreement on increased utilization of surplus heat of 28 March 2019 and Climate agreement for energy and industry etc. of 22 June 2020:
By utilizing waste products, including surplus heat from a company, the company can contribute to reduce CO2 emissions in other companies. If

the excess heat is desired
recycled, companies have to pay a surplus heat charge (according to above agreements), meaning that it is not economically viable to use the excess heat. The recommendation was to:
- Remove the excess heat charge and adjust the electric heating tax
- Adjust regulation for recycling of excess heat

Waste regulation no 2159 of 09/12/2020 (Danish translation of DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008):
To improve companies possibilities for increase recycling of waste it was recommended to create a better and clearer framework for recycling of waste by e.g. ease the possibility for classifying waste as by-products according to article 5 in the waste directive to avoid additional REACH registration.

Policy, law, or regulation geographic coverage

National

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

Denmark

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

Support with no exceptions

Description of engagement with policy makers

In November 2019, the Danish Prime Minister, Mette Frederiksen unveiled 13 climate partnerships covering the main sectors across Danish industry, including sectors such as Maritime, Transportation, Energy, Agriculture, Packaging, Production and Life science & Biotech. The goal was to aid the government in reaching the ambition of reducing CO2-emissions by 70% in 2030 by preparing recommendations for conditions that are needed to realize the climate ambition. The baseline year is 1990, which is the baseline utilized by the U.N. and the Paris Agreement. In 2021 the industry sectors prepared sector roadmaps with business objectives and recommendations to the government, after which the government's measures to support the sector's green transition was described.
Lundbeck's Executive Vice President of Product Development & Supply (C-Suite Officer and member of EM) participated in the climate partnership for the Life science and Biotech sector. The participation included:
- Filling out questionnaire about performance and ambitions

- Seminar with workshops identifying the level of ambition for the Life Science and Biotech sector and suggestions to the Government to support businesses reducing the CO2 emissions e.g. identifying existing regulation that prevent or delays the green transition.
- Consolidating meeting deciding main messages for the Government.
- Commenting on recommendations and sector roadmaps to the Government.

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

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

Yes, we have evaluated, and it is aligned

C12.3b

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

Trade association

Other, please specify

The European Federation of Pharmaceutical Industries and Associations

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

Consistent

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

We publicly promote their current position

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

Through a White Paper EFPIA highlights the commitment made by the EFPIA companies to:

- Establish climate change policies and strategies based on materiality and impact for individual companies, whilst addressing their value chains

- Pursue science based CO2 reduction targets
- Contribute to reduced climate changes
- Pursue Science based targets
- Contribute to reduced energy consumption and increased energy efficiency and seek opportunities to use more energy from renewable sources through out the value chain
- Annually and publicly disclose climate performance according to recognized methodologies such as WRI and the GHG protocol

EFPIA encourages appropriate use of a risk-based approach to environmental challenges and undertakes initiatives to promote climate action by supporting:

• The principles in UN Global Compact regarding climate;
• United Nations' Sustainability Development Goal 13, aiming for urgent action to be taken to combat climate change and its impacts;
• The Paris Climate Accord approved at COP21 by supporting the long-term goal to hold the increase in global average temperatures well below 2°C and to pursue efforts to limit the increase to 1.5°C;
• The European Union's ambition to be climate neutral by 2050;
• Adoption of a global framework (based on COP21) to address CO2e challenges under which all major emitting countries are committed to emission reduction goals and thus addressing the entire value chain.

Lundbeck have participated in the preparation of EFPIA's white paper on climate change by participating in meetings where level of ambition and content were discussed and commented on the actual wording. Lundbeck is participating in a similar way when the White paper is being updated in 2022. Lundbeck is supporting the statements in the White paper with no exceptions.

The 28 October 2021, EFPIA participated in a joint Industry Statement by ABPI, EFPIA, Farmindustria, IMC, IFPMA, JPMA, LEEM, PhRMA, and vfa on the UN Climate Change Conference (COP26) promoting the Biopharmaceutical Industry Actions to Tackle Climate Change and by expressing the biopharmaceutical industry's commitment to minimize the impact on the planet.

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

0

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

C12.4

(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

1

Sustainability_Report_2021.pdf

Page/Section reference

Letter from CEO with progress on target p. 4
Key figures p. 5
Most material issues incl. climate change p. 7
Target and initiatives within climate change p. 16 - 18
Performance and data p. 26 - 29
TCFD reference index p. 30

Content elements

Governance

Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

1

Climate Change Position_final.pdf

Page/Section reference

The document is our position on climate change

Content elements

Governance
Strategy
Emission targets

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

1

Climate commitment.docx

Page/Section reference

Document showing we have a video with our climate commitment at our homepage.

Content elements

Strategy

Emission targets

Comment

Publication

In mainstream reports

Status

Complete

Attach the document

1

Lundbeck Annual report 2021.pdf

Page/Section reference

Climate target and progress against targets at page 8, 38, 39

Content elements

Strategy
Emission targets

Comment

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, executive management-level responsibility	Biodiversity is not at material issue for Lundbeck as we do not operate in areas of high biodiversity value. Nor do we source natural resources. Biodiversity is part of Lundbeck Sustainability Strategy. Lundbeck follow SGD12: "Minimize our environmental impact" - but do not yet have a stand alone strategy on biodiversity or public targets on the matter.

		Our Executive Vice President of Product Development & Supply (C-suite officer) is appointed by the Chief Executive Officer (CEO) to have the corporate responsibility on sustainability issues and to chair The Health, Safety and Environmental (HSE) Council. Executive Management and HSE Council is responsible for our Sustainability Strategy and approve our public Position on Biodiversity. Initiatives ->2021: Denmark: • Green roof - 800 m2 of stonecrop (Sedum) roof. These are succulent perennials containing nectar that attract bees and butterflies. In addition, insects thrive in the soil. • Grass bed with daffodils and tulips attracting different pollinators • Green areas with different types of perennials specially selected for bees and bumblebees. Italy: • Planting trees - In a project with Local Authority (City Hall – Garden Office) in Italy, different species of trees was planted in a local park to increase the biodiversity and prevent problem with drought/climate change. Initiatives 2022: Denmark: • Overflow basins transformed to 560 m2 flowering Danish wild meadow containing a mix of 30 species of flowers. This will ensure variation in flowering all season and house multiple different insects. • 35 nest boxes for garden birds, placed on different trees at site Valby • Man-high insect hotels, to house and shelter different types of insects. • Beehive – a family of honey bees will be housed at site Valby. These are cared for by a local Lundbeck Employee. • New solar panel park (75,000 solar panels and grazing sheep). Italy: • Planting indigenous/domestic plants and trees in green area for new office building.

		Australia: • Restore native forests to help counter impact of bushfires. Other biodiversity related actions: • Lundbeck conduct Environmental Risk Assessment (ERA) for all new products prior to market authorization. • Member of EFPIA framework on Pharmaceuticals in the Environment (PiE) and follow trends on the matter. • Conduct supplier HSE audits in China and India where waste water, air emission, waste, soil pollution are part of the assessment on impacts on biodiversity.

C15.2

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

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

C15.3

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

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

C15.4

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

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments

Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection

C15.5

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

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No	

C15.6

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

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Impacts on biodiversity	Position on Biodiversity on Lundbeck.com https://www.lundbeck.com/content/dam/lundbeck-com/masters/global-site/pdf/sustainability/2022/02-feb/Position_on_Biodiversity.pdf 1
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Governance	News on LinkedIn on our new solar panel park (75,000 solar panels and grazing sheep). https://www.linkedin.com/posts/lundbeck_greenenergy-sustainability-unsdg-activity-6886606610286854145-rVH0 2

[1]Position_on_Biodiversity.pdf

[2]Screendump from LinkedIn.docx

C16. Signoff

C-FI

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

C16.1

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

	Job title	Corresponding job category
Row 1	Chief Executive Officer for H. Lundbeck A/S.	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

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

Lundbeck is a global pharmaceutical company highly committed to improving the quality of life of people living with brain diseases. For this purpose, Lundbeck is engaged in the research, development, manufacturing, marketing and sale of pharmaceuticals across the world. The company's products are targeted at the disease areas within psychiatry and neurology.

Focus on R&D is the most important pillar in Lundbeck's ambition to improve treatment for people living with brain diseases. We are specialists in our area and have a state-of-the-art research facility in Denmark.

We cooperate closely with strategic partners all over the world, ensuring the best possible foundation for innovation and the development of new treatment solutions.

Lundbeck employs approximately 5,300 people worldwide. We have employees in more than 50 countries, and our products are registered in more than 100 countries. We have production facilities in Denmark, France and Italy and our research centers are based in Denmark.
Lundbeck generated revenue of DKK 16.299 billion in 2021.
Our sustainability actions are integrated into Lundbeck's strategy that has significant impact on 6 of the 17 SDG (Sustainable Development Goal). In addition, we are seeking partnerships with others to enable change and maximize impact across our sustainability efforts.
SDG 3 "Good Health and Well-being" is closely linked to our corporate purpose and dedication to restore brain health, so every person can be their best. SDG "13 Climate Action" will drive our efforts to prepare for a zero emissions future. We will use our influence and act to promote SDG 5, 8, 12 and 16.
The sustainability strategy aims to ensure that our business activities are conducted in a way that supports the UN Global Compact Principles and the SDGs and mitigate significant risks and adverse impacts.
Climate strategy: In 2007 Lundbeck developed our first Climate strategy, making a firm commitment to minimizing CO2 emissions, and confirming our ambition to be among the leaders within the pharmaceutical industry.

Our current CO_2 target is to:

- Have net zero emissions no later than 2050
- Further reduce carbon emissions from production and fleet drastically by almost two-thirds over the next 15 years
- Work with our suppliers and customers to reduce our carbon footprint outside our premises by nearly a fifth over the next 15 years

Because scope 3 emissions are the largest contributor to our CO2 emission, (around 90%) we have also developed a scope 3 target, that includes that we will engage with a large number of our suppliers to motivate them to develop climate targets. By the end of 2019 we decided to accelerate our actions and join the global movement "Business Ambition for 1.5°C" of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement. This commitment clear expresses our support to SDG 13 "Climate Action".

SC0.1

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

	Annual Revenue
Row 1	16,299,000,000

SC1.1

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

Requesting member

Johnson & Johnson

Scope of emissions

Scope 1

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO2e

79

Uncertainty (±%)

5

Major sources of emissions

Natural gas, methane and biooil for heating, steam and cooling purposes at our two chemical sites.
Gasoil and Citygas primarily for steam production at our two Danish sites.
Company car fleet.

Verified

Yes

Allocation method

Allocation based on the number of units purchased

Market value or quantity of goods/services supplied to the requesting member

59,253

Unit for market value or quantity of goods/services supplied

Other, please specify

Units of boxes

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

Production of pharmaceuticals requires several process steps. Depending on the production capacity at our chemical sites some of the process steps can be made at one of the site and some process steps at the other site. The GHG emission is calculated by multiplying the number of produced units with the intensity figure per production unit/kg CO2. Our intensity figure is a combined scope 1, 2, 3 figure based on our total scope 1, 2, 3 emission from all our production sites. For this reporting only scope 1 data is used. The change in CO2 emission and production volumes will reflect on the intensity figure. The figure is based on sales of production to Johnson & Johnson as part of Lundbeck total production.

Requesting member

Johnson & Johnson

Scope of emissions

Scope 2

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO2e

24

Uncertainty (±%)

5

Major sources of emissions

Electricity for light and equipment and district heating for heating.

Verified

Yes

Allocation method

Allocation based on the number of units purchased

Market value or quantity of goods/services supplied to the requesting member

59,253

Unit for market value or quantity of goods/services supplied

Other, please specify

Unit of Boxes

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

Production of pharmaceuticals requires several process steps. Depending on the production capacity at our chemical sites some of the process steps can be made at one of the site and some process steps at the other site. The GHG emission is calculated by multiplying the number of produced units with the intensity figure per production unit/kg CO2. Our intensity figure is a combined scope 1, 2, 3 figure based on our total scope 1, 2, 3 emission from all our production sites. For this reporting only scope 2 data is used. The change in CO2 emission and production

volumes will reflect on the intensity figure. The figure is based on sales of production to Johnson & Johnson as part of Lundbeck total production.

Requesting member

Johnson & Johnson

Scope of emissions

Scope 3

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO2e

53

Uncertainty (±%)

41

Major sources of emissions

The scope 3 emission is from 3 scope 3 categories. Category 1a: Purchased goods and services (product), Category 4: Upstream transportation and distribution, Category 5: Waste generated in operations . Scope 3 is calculated in our footprint model for all relevant scope 3 categories using both direct data and spend data as well as general emission factors.

Verified

No

Allocation method

Allocation based on the number of units purchased

Market value or quantity of goods/services supplied to the requesting member

59,253

Unit for market value or quantity of goods/services supplied

Other, please specify

Unit of Boxes

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

Production of pharmaceuticals requires several process steps. Depending on the production capacity at our chemical sites some of the process steps can be made at one of the site and some process steps at the other site. The GHG emission is calculated by multiplying the number of produced units with the intensity figure per production unit/kg CO2. Our intensity figure is a combined scope 1, 2, 3 figure based on our total scope 1, 2, 3 emission from all our production sites. For this reporting only relevant scope 3 data is used. The change in CO2 emission and production volumes will reflect on the intensity figure. The figure is based on sales of production to Johnson & Johnson as part of Lundbeck total production.

Requesting member

CVS Health

Scope of emissions

Scope 3

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO2e

58

Uncertainty (±%)

41

Major sources of emissions

The scope 3 emission is from 3 scope 3 categories. Category 1a: Purchased goods and services (product), Category 4: Upstream transportation and distribution, Category 5: Waste generated in operations . Scope 3 is calculated in our footprint model for all relevant scope 3 categories using both direct data and spend data as well as general emission factors.

Verified

No

Allocation method

Allocation based on the number of units purchased

Market value or quantity of goods/services supplied to the requesting member

24,446

Unit for market value or quantity of goods/services supplied

Other, please specify

Unit of Boxes

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

The products for CVS Health are solely produced at Lundbecks suppliers in scope 3. At the moment we have not been able to get precise data from our suppliers about the CO2 emission from these products. Instead we have informed about the total scope 1, 2 and 3 emission if the products had been produced at our own sites, because we expect that the CO2 is comparable at our suppliers. If the products had been produced at Lundbecks own sites the scope 1 emission had been: 86 ton, Scope 2: 26 ton and Scope 3: 58 ton. Total of 170 ton. Especially scope 3 is subject to great uncertainty e.g. we do not expect that our suppliers have the same amount of research and development dedicated to their production as we have.

SC1.2

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

Lundbeck sustainability Report 2021
Link: Sustainability_Report_2021.pdf.coredownload.pdf (lundbeck.com)

In our CDP investor response 2021 all data are public available. In section 6 you find intensity data and scope 1, 2, 3 data.

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	Different products, weight and packaging sizes emit different amounts of GHG emissions. This makes it very complicated to make an exact calculation of the emission from the different product units. Installation of energy meters on relevant production equipment could be one step on the way to make more precise calculation. We use a CO2 inventory input-output database (By CarbonTrust), to calculate the emission based on economic spend data and primary supplier data when available.
Other, please specify Lack of data	When products are produced solely by scope 3 suppliers and we do not have detailed data from our suppliers. Allocation becomes very uncertain. Some of the scope 3 emissions are based on proxy data, general emission factors and spend data making the uncertainty of the numbers reported higher. We do however engage directly with our largest/strategic suppliers. By now 44 have been directly contacted to provide emission data and target data. Going forward we will collect emission data from more suppliers, as we will engage with 500 in 2022.

SC1.4

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

Yes

SC1.4a

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

In 2020 we made a new Scope 1, 2 and 3 inventory combined in a new database. This has updated the categories in scope 3 considerably. This work has been continued in 2021.
We expect to increase the dialogue about climate changes and product specific emissions in the future in order to achieve our emission targets. This will make our scope 3 data more precise and it will increase our possibilities for allocating CO2 emissions for products produced solely in our scope 3. In 2022 we will initiate development of LCA for our products.

Target of Engagement with suppliers:
Our supplier engagement strategy is based around the 3 Scope 3 categories of our SBTi-approved science-based target, representing 76% of scope 3 emissions. Our SBT target include a 19% reduction of the 3 categories in our target scope. The first step in our supplier engagement have in 2021 been to receive emission data (scope 1, 2 and 3) from our largest and strategic suppliers and information about climate targets and use of renewables. We have engaged with all suppliers for the distribution of our products, all the suppliers within our Contract Manufacturing Organizations (included in Purchased goods and services) and the largest within Purchased goods and services and Business travel.
Next step in 2022 is to submit amendments to the existing contracts within category 1: Purchased goods and services. The amendment include requirements about delivering annual emission data and use of renewable electricity for the products they supply to Lundbeck. In 2021 one supplier had this requirement included in the contract.

SC2.1

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

Requesting member

Johnson & Johnson

Group type of project

Relationship sustainability assessment

Type of project

Assessing products or services life cycle footprint to identify efficiencies

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized

3-5 years

Estimated lifetime CO2e savings

936

Estimated payback

Cost/saving neutral

Details of proposal

Establishment of a single database or similar solution where companies can exchange experiences on different climate issues like: Specific energy reducing initiatives, good ways to buy carbon credits, good ways to reduce scope 3 emissions, tools to forecast GHG emissions, tools to allocate CO2 emissions to customers, tools to motivate suppliers to establish climate targets etc. Also specific emission factors based on LCA is needed for a better understanding og the data.
An estimate that 60% of the total CO2 emission (156 tons CO2) can be saved - corresponds to 936 tons CO2.

Requesting member

CVS Health

Group type of project

Relationship sustainability assessment

Type of project

Assessing products or services life cycle footprint to identify efficiencies

Emissions targeted

Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized

3-5 years

Estimated lifetime CO2e savings

1,020

Estimated payback

Cost/saving neutral

Details of proposal

Both the time frame and the CO2 savings are very difficult to define since it depends on how the cooperation with the supply chain develop.

Establishment of a single database or similar solution where companies can exchange experiences on different climate issues like: Specific energy reducing initiatives, good ways to buy carbon credits, good ways to reduce scope 3 emissions, tools to forecast GHG emissions, tools to allocate CO2 emissions to customers, tools to motivate suppliers to establish climate targets etc. Also specific emission factors based on LCA is needed for a better understanding og the data.
An estimate that 60% of the total CO2 emission (170 tons CO2) can be saved - corresponds to 1020 tons CO2.

SC2.2

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

No

SC4.1

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

Yes, I will provide data

SC4.1a

(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.

0.49

SC4.2a

(SC4.2a) Complete the following table for the goods/services for which you want to provide data.

Name of good/ service

Cipramil

Description of good/ service

Anti depressive medicine for Johnson&Johnson

Type of product

Final

SKU (Stock Keeping Unit)

1

Total emissions in kg CO2e per unit

2.63

±% change from previous figure supplied

94.9

Date of previous figure supplied

May 19, 2021

Explanation of change

Total emissions in kg CO2e per unit in 2021 was 2.63. In 2020 was 75.90. This is an 96.5% reduction compared to 2020.
Due to our new CO2 inventory model, the emission differ. As only category 1a, 4 and 5 is included in the scope 3 in 2021) as well as many calculations in 2020 was based on sales data/spend. A total of 3.4% reduction compared to 2020 as category 1a and 4 decreased by 7%, 18% respectively. However reporting of the number of units produced has been recalculated due to an error in 2020, making a direct comparison from 2020 to 2021 difficult.

Methods used to estimate lifecycle emissions

GHG Protocol Product Accounting & Reporting Standard

Name of good/ service

Northera, Sabril, Xenazine

Description of good/ service

Pharmaceuticals/medicine for CVS

Type of product

Final

SKU (Stock Keeping Unit)

1

Total emissions in kg CO2e per unit

2.37

±% change from previous figure supplied

95.4

Date of previous figure supplied

May 19, 2021

Explanation of change

Total emissions in kg CO2e per unit in 2021 was 2.37. In 2020 it is 51.54. This is an decrease of 95.4% compared to 2020.
Due to our new CO2 inventory model, the emission differ (especially in scope 3 as only category 1a, 4 and 5 is included in scope 3 in 2021) as well as many calculations are based on sales data/spend.
Spend in 2021 was higher than 2020 resulting in higher emission in scope 3. A total of 3.4% reduction compared to 2020 as category 1a and 4 decreased by 7%, 18% respectively. However reporting the number of units produced has been recalculated due to an error in 2020, making a direct comparison from 2020 to 2021 difficult.

Methods used to estimate lifecycle emissions

GHG Protocol Product Accounting & Reporting Standard

SC4.2b

(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.

Name of good/ service

Cipramil for Johnson&Johnson

Please select the scope

Scope 1, 2 & 3

Please select the lifecycle stage

Cradle to gate

Emissions at the lifecycle stage in kg CO2e per unit

2.63

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

In order to inform about "cradle to gate" we need all scope 1, 2 and 3. All relevant scope 3 emissions are included and based on volume data or primary data from our suppliers if available.
Scope 1 and 2 is under our control but our scope 3 emissions are not in full control. Details about ownership and emissions can be read in our CDP response.

If you are verifying/assuring this product emission data, please tell us how

We are not verifying these data.

Name of good/ service

Pharmaceuticals for CVS

Please select the scope

Scope 3

Please select the lifecycle stage

Cradle to gate

Emissions at the lifecycle stage in kg CO2e per unit

2.37

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

Produced by CMO. All relevant scope 3 emissions are included and based on volume data or primary data from our suppliers if available.

If you are verifying/assuring this product emission data, please tell us how

We are not verifying these data.

SC4.2c

(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.

Name of good/ service	Initiative ID	Description of initiative	Completed or planned	Emission reductions in kg CO2e per unit
All our products	Initiative 1	Reduction of 0.09 kg CO2e/unit in 2021. We cannot specify which of our energy reducing initiatives that are specifically related to one type of product because most of our initiatives are related to our facilities and therefore impact all our products. A complete list of our energy reducing activities can be seen in section C.4.3b Of energy reducing examples can be mentioned optimization, adjustment to energy on demand and renewal of old machines/equipment like pumps, ventilation, cooling etc. Lundbeck had 3.4% (2317tons) decrease in scope 1, 2, 3 (category 1a, 4 and 5) CO2 emission in 2021 compared to 2020 as category 1a and 4 decreased by 7%, 18% respectively.	Completed	0.09

SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?

No

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

The European Climate Pact Submission

Please indicate your consent for CDP to showcase your disclosed environmental actions on the European Climate Pact website as pledges to the Pact.

Yes, we wish to pledge to the European Climate Pact through our CDP disclosure

Please confirm below

I have read and accept the applicable Terms