Welcome to your CDP Climate Change Questionnaire 2021

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 5,600 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 17,7 billion in 2020.
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 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. 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.

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, 2020	December 31, 2020	No

C0.3

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

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

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 3 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. Th HSE Council has the highest level of responsibility for climate change and approve our climate targets and strategy. 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 presented for the board is our decision about joining the global movement “Business Ambition for 1.5°C” (Dec 2019) and the development of our new Science Based Target that was announced in the beginning of 2021.

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	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 are presented for the Board. Additionally, we include status on our climate performance in our quarterly financial release. These

	Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	announcements are carefully reviewed at Board meetings. The Executive Vice President of Product Development & Supply (C-suite officer) is responsible for this input at the Board meetings. The CEO has appointed the Executive Vice President of Product Development & Supply to have the highest responsibility on climate performance and management and to chair the HSE Council, which is the committee with the highest responsibility on climate performance and management. This means the Executive Vice President of Product Development & Supply has the overall responsibility of defining and evaluating corporate policies, strategies, guidelines and corporate activities and monitoring progress against targets concerning HSE aspects including climate change. The HSE Council have 1 meeting every quarter of the year, where status on climate targets and objectives are reviewed and discussed.

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
Other, please specify The Senior Vice President for Supply Chain & Facility Management is approver of the Business Impact Analysis Report and has the overall responsibility for the daily operation of the climate target.	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. 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 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 reason for this appointment is, that he:
- Is member of the Executive management.
- Participate at Board meetings
- Has the overall responsibility for all production and facility management and the overall responsibility for Lundbeck's energy costs.
- Is member of the Steering group for the Corporate Climate project.
- Is reporting in the Corporate risk register
- Is responsible for reporting in the quarterly Corporate release about status on CO2 emissions and other substantive status and decisions related to our climate ambition e.g. our decision about joining the "Business Ambition for 1.5°C" that is signed by our CEO and the approval of our Science Based 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 change and 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.
Climate change issues are to be one of the significant environmental issues in Lundbeck and are therefore managed and controlled by the HSE Council. This means that Lundbeck's Climate Strategy and our long-term CO2 emission target is decided and approved by the HSE Council. The HSE Council have quarterly meetings.

The Senior Vice President (SVP) for Supply Chain & Facility Management 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 risks. The reason for this responsibility is that the SVP for Supply Chain & Facility Management:
- Has the responsibility for Lundbeck's Supply chain and avoidance of risks related to business interruptions in the supply chain.
- Is heading the Corporate HSE department where all the corporate climate activities are anchored including the Corporate Climate project, and where the CDP response is prepared.
- 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 referring to the Executive Vice President of Global PDS (C-suite officer) that has the highest responsibility on climate issues.
- 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 initiatives are recognized through the scoring system. The score is used as input to the bonus system and 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 inventivized	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. He has performance according to our corporate climate ambition included in 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 2020 we had a short-term target to reduce CO2 emissions from operation of our sites with 4% compared to 2019 and a Science based target including a 45% reduction of our Scope 1 and 2 emissions from 2010 to 2020.
Other, please specify The Senior Vice President for Supply Chain & Facility Management has the overall responsible for the daily operation of the climate target	Monetary reward	Emissions reduction project Emissions reduction target	There is an annual bonus for meeting short term targets related to emission reduction targets that affect scope 1 and 2 emissions. The short-term target is based on our long-term target. The short-term target in 2020 was to reduce our CO2 emissions (scope 1 and 2) with 4% compared to 2019. A specific emission reduction project concerning entering a Power Purchase Agreement with additional renewable energy is also included to trigger a bonus. The size of the bonus is managed in our Performance Management System. In the Performance Management System all managers and employees have individual goals. Where relevant climate related goals are included. Once a year the performance is evaluated and scored, and the score is determining the size of the bonus.
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	There is an annual bonus for performing climate initiatives. E.g. in 2020 the finalization of our Power Purchase Agreement was included in a Procurement managers bonus targets. In 2021 several procurement

		Supply chain engagement	managers have included targets about including climate requirements in purchasing contracts and include climate issues in our supplier engagement activities.
Environmental, health, and safety manager	Monetary reward	Emissions reduction project Company performance against a climate-related sustainability index Other (please specify) Development and approval of new SBTi target	There is an annual bonus for meeting GHG emission reduction targets. 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. our target about achieving approval of a new SBTi target in 2020 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 Supply Chain & Facility Management	Monetary reward	Efficiency project	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.
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 Supply Chain & Facility Management. The initiative must support Lundbecks Business principles. Energy reducing activities supports many of these Business principles and can therefore also be 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 2019 a campaign about implementing monthly environmental initiatives in all the administrative corporate functions won the award. The initiatives included meat free

			lunch, turn off light, reduce consumption of single use tableware etc.

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 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 match our Science based target running from 2010 - 2020.
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 flooding at our own sites and at our suppliers/partners sites are both assessed to have Moderate financial and strategic impact and be Unlikely. This result in a final: 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 value chain, are identified and managed in a common risk management system. Our fundamental 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 such 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 and routines. The decentralized risk evaluation in the business units is regularly reported into the

corporate risk register that provides a consolidated picture of our risk exposure by detailing each risk, risk category and type. The risk descriptions give details of the event, its current status, the status of the response, an assessment of 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 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 and asset level. The primary focus of the report is to identify business interruption impact and mitigation of risks securing a resilient supply chain. Based on the identified risks our Business insurance premium is decided. The main results from the BIA report is presented for the Executive Management 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 considers 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 2020, which were identified in our Business Impact Analysis, are flooding due to severe weather events at our pharmaceutical site in Denmark and river flooding at our warehouse service provider in Tennessee, USA.
At our own DK site we experienced a flooding due to heavy rain app. 10 years ago. Since then we have secured our site towards similar future situations e.g., we have established catch basins and prepared possibilities for transferring production between our sites. Due to this we have decreased the likelihood for a big damage significantly.
During 2020 we also increased the production capacity at our French site allowing us for fast recovery in case of Business interruption at our Headquarter site. This has reduced the financial impact from a break down at our headquarter site by 25%.
To mitigate the risks at our suppliers, our most critical suppliers prepare Factory Assessment Reports and undergo an extended evaluation with audits and follow up visits. Additionally, we establish dual sourcing when possible. For instance we have implemented dual-warehousing in Nevada to secure continued supply in the event of an incident at our Service 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 followed quarterly and social/reputational trends are evaluated at least once a year. The manager of the HSE department reports quarterly to the HSE Council that discuss and decide if follow-up 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 taxes/prices 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 seven double 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 tax/pricing we have worked dedicated with energy optimization at our sites. Since 2006 we have reduced our energy consumption by 32% and our CO2 emissions by 70%. Additionally, we are exploring 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 2022. We are also looking for similar possibilities to cover our European sites and our sites in USA. By transferring to renewable electricity, we expect to be able to avoid the impact from increasing CO2 taxes/pricing.

OPPORTUNITIES are identified and managed by the decentralized business units as they have the most extensive knowledge. Evaluation of opportunities 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 Climate reported to following ESG indexes in 2020: Sustainalytics, MSCi, VE, ISS ESG, FTE Russel, Bloomberg and Nasdaq. During 2020 another new opportunity for sustainability linked loans revealed. During 2021 we will explore this opportunity further. 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 these 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. But in a longer perspective climate scenarios predict that CO2 pricing will be used more and in more countries. This will 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 costs, energy efficiency, reporting and material 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 favour 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. 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 stricter requirements to fixed temperature during transportation. The effect of this regulation is currently being investigated and evaluated, but we expect an increase in transportation cost on app. 50% because we will have to favour trucks with cooling systems on several product transports. Regulation related to climate reporting is also developing at the moment. The European Commission has published a legislative proposal for a Corporate Sustainability Reporting Directive, revising the 2014 Non-Financial Reporting Directive, to establish a set of mandatory European sustainability reporting standards applicable to all large companies and all companies listed on EU-regulated markets. This will increase the reporting burden and costs related to assurance of sustainability data. As we already respond to CDP and are having a large part of our sustainability data externally assessed, this is considered a negligible risk.
Technology	Not relevant, explanation provided	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. All technologies that can contribute to reduction of our energy or raw material consumption present an opportunity for the company to reduce our risk related to increasing prices on energy/CO2 and raw materials, but also an opportunity in reaching 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 planning to use a part of our solvent waste as fuel in our new exhaust air treatment system (RTO), that have been installed during 2020 at our chemical site in Denmark. This initiative will reduce a huge increase in our fuel consumption and reduce the amount of waste that otherwise should be handled externally. Apart from this initiative we always switch to more energy efficient equipment, when we are renewing old equipment like pumps.
Legal	Not relevant, explanation provided	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. By developing Science based targets we increase our cooperation with both up- and downstream suppliers and through this reduce climate related risks at both our own sites but also at our suppliers. Since 2006 we have worked actively to reduce our environmental impacts and are today committed to support the Paris Agreement. 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 by 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, 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. Since we continuously are increasing our ambitions in the environmental field, 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 HSE and ethical 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. 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 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 and primo 2021 we announced our new Science based target approved (1.5°C) by SBTi We also prepared our first TCFD reference index as part of our Sustainability report for 2020. 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 including flooding and extreme weather events 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 flooding due to severe weather events at our Headquarter site in Denmark. Some years ago we experienced big damages around the site due to heavy rain, resulting in severe repairs and establishment of two catch basins on the site.

		Additionally, we are (when possible) establishing green roofs when we make big renovations and new facilities. At the moment we are planning to establish app. 2,850 m2 green roofs at a new facility to spare the sewage system when heavy rain is occurring. Despite our mitigating actions we cannot exclude future severe weather events resulting in damages at our site. A worst-case scenario would be a big damage in our Finished goods production due to flooding or a fire caused by lightning.
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 severe weather events and result in e.g. 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 direct costs due to repairs.

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. For instance, we do 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 energy prices. Also climate scenarios predict that CO2 pricing/taxes will be used more and in more countries. Also, regulatory incentives towards favouring renewable energy will be introduced. E.g. in Denmark, where our headquarter functions and large parts of our production are situated, differentiation between night and day prices for electricity are currently being implemented in order to motivate the use of energy at nighttime where there is excess of wind energy. This means that the price for energy used in daytime will increase. Lundbeck cannot move all of our electricity consumption to nighttime. Therefore this initiative will mean increased operational costs because the electricity will be more expensive during daytime where we primarily produce and operate.

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.

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

42,200,000

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 0.3% of our revenue (app. 58 MDKK compared to our revenue in 2020 at 17,7 MDKK). In Denmark a part of the energy cost is a carbon tax currently on app. 1 MDKK a year. We expect that energy prices and Carbon pricing/taxes will rise in the future in most parts of the world. In IEA450 it is predicted that CO2 prices can increase by a factor 7 in most OECD countries. A worst-case scenario could therefore be a factor 7 increase of our current Danish CO2 tax and then multiplied with the number of sites we have outside Denmark (3 more sites in Europe and 3 sites in USA). This would be an increase on 6 sites*1 MDKK in current carbon tax*factor 7= 42 MDKK. This would constitute 0.2% 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: 42 MDKK DKK + cost for complying with the energy directive: 200.000 DKK. In total = 42.2 MDKK

Cost of response to risk

11,600,000

Description of response and explanation of cost calculation

Risks for increasing energy costs 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 and our energy saving projects costed 10.2 MDKK in 2020.

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 covering the entire electricity consumption at our two Danish sites. In the years to come we will explore our possibilities for signing similar agreements for our European sites and our sites in USA. The Danish PPA will reduce our annual energy cost with app. 1 MDKK, but the development and finalizing the agreements takes internal resources which is estimated to 529,000 DKK. So far our transition towards renewable electricity has not implied any extra cost.

The continuous development and implementation of our Climate strategy and targets require internal resources estimated to app. 1MDKK a year.
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 saved app. 2 MDKK per 4 year. 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: 10.2 MDKK, Internal resources for CO2 strategy: 1.2 MDKK and Energy reviews: 200,000 DKK. In total 11.6 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
Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Lundbeck's own sites are located in low risk areas (Denmark) and medium risk areas in Italy and France. Even though the risk is small a variety of extreme weather situations that damage buildings in severe degree can occur at Lundbeck's own sites. E.g. in 2012 we experienced several serious damages at our headquarter site in Denmark due to flooding and storms. Fortunately, it did not result in any business interruptions, but we had several repairs on our facilities costing 8 MDKK. Following we initiated several activities to secure our buildings and production facilities in the years after to better resist similar situations with heavy rainfall or storms. E.g. we have established catch basins at two locations at our headquarter site. Even though we today have secured our sites, we cannot exclude the risk of damages, that in worst case can also affect our production capacity due to extreme weather situations. A worst-case scenario could be a severe flooding or a devastating fire caused by lightning in our Finished Goods Production.

Time horizon

Medium-term

Likelihood

Unlikely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,724,000,000

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 risks are described. This report is based on thorough analysis and insurance inspections at our sites. In this report the worst-case scenario with a complete damage of our Finished Good Production is described and estimated to a loss on 1,724 MDKK. This is calculated by adding the potential business interruption of the products we are manufacturing at our headquarter site (mainly 5 products) summing up to 1,379 MDKK and the estimated property loss: 345 MDKK.

Cost of response to risk

29,427,000

Description of response and explanation of cost calculation

To identify potential risks, 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. A worst-case scenario is identified to be a devastating damage eventually caused by a fire or a huge flooding at our Finished Goods production.

Risks for severe weather events that damages our facilities are reduced by securing our sites. We have made a criticality analysis at our headquarter in Denmark, identifying the biggest risks and what buildings that are most exposed to damages from extreme weather situations. The analysis resulted in implementation of several activities that secure our buildings towards heavy rainfall, storms etc. E.g. our park area containing a catch basin and our underground catch basin under a building consuming twice the

amount of water from a normal rainwater incident. We have also implemented pump installations, secured fragile installations like power station and in 2019 we installed a fire hydrant to minimize damages from a fire e.g. due to lightning (in all app. 8.1 MDKK). Currently we are establishing app. 2,850 m2 of green roofs which will reduce the load of the sewage systems in heavy rain situations (627,000 DKK).
To reduce the business interruption from a devastating damage of our Finished Goods production we have also increased our production capacity at our Pharmaceutical site in France, allowing for fast recovery on a part of the production volume. This has reduced the loss from business interruption from last year 1,839 MDKK to this year 1,379 MDKK. The investment in increased production capacity (new machinery) is app. 15 MDKK.

Cost of response to risk can therefore be summed of the cost for:
Preventive activities from 2013 to 2019: app. 8.1 MDKK
Cost for green roofs compared to roofing felt 627,000 DKK
Property and Business interruption insurance costs 5.7 MDKK annually.
Investment in increased production capacity at our French site: 15 MDKK
In all: 29,427,000 DKK.

Comment

During daily operations the increased production capacity at our French site is used to increase the general production capacity.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

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

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.

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)

59,000,000

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: 43 MDKK
Business interruption: 16 MDKK
In all: 59 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. Additionally, we have communicated with our service provider about securing the warehouse towards flooding and in case of an incident to minimize the impact Lundbeck's inventory holding. To further reduce the impact, in the event of an incident, Lundbeck will engage in dialogue with manufacturers to expedite the resupply of lost inventory.

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

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Current regulation
Mandates on and regulation of existing products and services

Primary potential financial impact

Increased direct costs

Company-specific description

As a pharmaceutical company we must comply with all Good Distribution Practice (GDP) requirements. GDP refers to the regulatory guidelines governing the wholesale distribution of medicinal products to ensure their quality and integrity is maintained throughout the supply chain from the manufacturer to the end user. These requirements are being tightened with increased temperature requirements during distribution by air of the medicinal products from the manufacturer to the end user. Lundbeck prefer transportation by sea over air, but in situations where volumes are very low or urgency due to time constrains we have to use air transportation.
The increased temperature requirements results in using active cooling containers

instead of thermal blankets on some of our distribution routes by air. Many of our mature products are quit stable towards temperature fluctuations, but some of our new products are more sensible increasing the need for active cooling. The combination of increased requirements and more sensible products will increase our use of cooling containers in the years to come.
To comply we have prepared an internal guideline based on following EU guidance:
EU GDP guideline: “Guideline of Good Distribution Practice of Medicinal Products for Human Use (2013/C 343/01).
•EU guideline: “on principles of Good Distribution Practice of active substances for medicinal products for human use (2015/C96/01)”.
•Annex 9 – “Guide to Good Storage Practices for Pharmaceuticals. Geneva, World Health Organisation, 2003 (WHO Technical Report Series, No 908)”.
•Annex 5 – “WHO Good distribution practices for pharmaceutical products” WHO Technical Report Series, No 957, 2010.
This situation will increase our scope 3 emissions and introduce a new constrain in our work with reducing our scope 3 emissions and reaching the ambition we signed in the pledge “Business Ambition for 1.5°C”.

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)

30,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

To estimate the impact of the new GDP requirements, all distribution routes are being analyzed, and the extended need for active cooling during transportation is being mapped. In 2020 the distribution costs increased to 45 MDKK compared to app. 15 MDKK before the legislation came into force. This gives an increase in cost at: 30 MDKK

Cost of response to risk

1,300,000

Description of response and explanation of cost calculation

All regulations are followed continuously in the relevant local business units and the business risk is evaluated. To comply with the increased requirements for temperature cooling, we have acquired new more advanced temperature loggers and implemented a new electronic system to handle the information from the temperature loggers. This information is used for analysing what distribution routes we are required to have cooling containers and what routes we still can use thermal blankets. At the same time, we are continuously trying to move as many distribution routes from air to sea. The less routes we have by air the less distribution related CO2 emissions we have. In 2020 we have tested a new system for active cooling during transportation, a va-Q-One thermo box, to replace the electrically powered cooling containers. We are currently exploring how many routes we can use the new system and the cost, but we expect it will reduce the distribution cost.
To estimate the cost for implementing the new GDP requirements, we can include the cost for the new temperature logging system (300,000 DKK) and internal resources used for implementing the new electronic system, analyzing data and testing new cooling system (two FTE corresponding to a cost on app. 1 MDKK). In all: 1.3 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 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 a long-term PPA agreement 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 2019 we began to explore our opportunities for a PPA and 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 the beginning of 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 we have started exploring our possibilities for entering PPA's covering our sites in Europe and USA. Parallel our Italian site are planning to install solar panels at some of the buildings on-site in. Cost and capacity of the panels are currently being explored.
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:

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)

43,000,000

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 from 2022.
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. A worst-case scenario could therefore be a factor 7 increase of our current Danish CO2 tax at app. 1 MDKK and then multiply with the number of sites we have (3 more sites in Europe and 3 sites in USA). This would be an increase on 6 sites*1 MDKK in current Carbon tax*factor 7 = 42 MDKK. I
Reduced energy cost due to the PPA: 1 MDKK
Avoided CO2 tax/pricing: 42 MDKK
In all: 43 MDKK

Cost to realize opportunity

11,729,000

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 have 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 32% 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 a Power Purchase Agreement (PPA) with additional renewable energy. This agreement will secure renewable electricity for our two Danish sites by 2022.

The cost for realizing this opportunity is constituted by:
Internal resources for developing the Climate strategy: 1 MDKK
Cost associated with energy saving projects: 10.2 MDKK.
Internal resources and consultancy fee for preparing the PPA: 529,000 DKK
In all: 11.729 MDK DKK.

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) rating 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 exposure 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/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 Ørsted, Vestas or oil companies).
Both in 2019 and in 2020 Lundbeck considered taking up green loan, but due to extended lead times decided against it.
Lundbeck is continuously following the development of new loaning opportunities.

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)

2,800,000

Potential financial impact figure – maximum (currency)

4,100,200

Explanation of financial impact figure

There is potential for good ESG rating 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 = EUR 450,000/year* equal to app. 3.354.700 DKK/year
Bonds: Benchmark size – saving potential: 0.02% * 500,000,000 = EUR 100,000/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. EUR 500 M). 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 quality. Both the corporate loan and bond market have seen a increased focus on ESG; bond market more so 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 an ESG friendly company. In this sense being not focused on that could mean a higher costs of performing badly on ESG compared to the benefit of being a fairly good performer.

The new possibility for changing our existing loans to sustainability linked loans reveals a possibility of saving 2,800,000 DKK in interests.

A potential financial impact range is therefore from 2,800,000 DKK (Sustainability linked loans) to 4,100,200 DKK if we choose the possibility with regular banks loans and corporate bonds.

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 responses and dialogue in 2020: Sustainalytics, MSCi, VE, ISS ESG, FTE Russel, Bloomberg and

Nasdaq. 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, we have to develop and achieve at least 3 sustainability targets/KPI's. During the first part of 2021 we have suggested following targets/KPI's to the bank: Absolute scope 1 and 2 reductions, Percentage renewable energy covering our Scope 1 and 2 consumption and Recycling of solvents. Target period is decided by the bank to be 2019 to 2025. During summer 2021 the level of ambition for the KPI's will be decided and consolidated internally and following agreed upon with the bank.

The current costs for this strategy are all costs for internal resources for:
- Responding to benchmarks: Internal resources: 1 MDKK
- Development of the climate ambition and targets: 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 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 2020 Lundbeck managed to recycle 68% of the used volatile organic chemicals in our chemical production and we are continuously looking for new possibilities recycling of chemicals. In 2020 a new method for palladium recycling and toluene recovery was developed creating a possibility for reducing CO2 emissions by app. 422 tons/year and saving 9,000,000 DKK/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)

9,010,000

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 project 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 (this project 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= 9.01 MDKK

Cost to realize opportunity

1,510,000

Strategy to realize opportunity and explanation of cost calculation

Lundbeck's production sites are constantly 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 2020 a new innovative methodology was developed. Via a cooperative process between Lundbeck and the Pd supplier it is now possible to recycle the Pd 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 tested in large scale in 2020 and will run fully at our chemical site in Denmark in start 2021 and will be implemented at our chemical site in Italy in 2021. 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

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes

C3.1b

(C3.1b) Does your organization intend to publish a low-carbon transition plan in the next two years?

	Intention to publish a low-carbon transition plan	Intention to include the transition plan as a scheduled resolution item at Annual General Meetings (AGMs)	Comment
Row 1	Yes, in the next two years	Yes, we intend to include it as a scheduled AGM resolution item	Lundbeck joined the "Business Ambition for 1.5°C" in Dec 2019. By doing so we committed to have Net Zero emissions at latest in 2050. Additionally, we had a new Science Based Target (SBT)(1.5°C) announced in Feb 2021. This commitment and target constitute a significant part of our Low Carbon Transition Plan. The Net Zero commitment and the new SBT target were presented verbally at the AGM in March 2021. We expect to include our Low Carbon

			Transition Plan as a scheduled item within the next two years.

C3.2

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

Yes, qualitative

C3.2a

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

Climate-related scenarios and models applied	Details
RCP 2.6	The RCPs are developed by the Intergovernmental Panel on Climate Change and describe four possible climate futures, based on a wide range of possible changes to GHG emissions as a result of human activity. The RCP 2.6 pathway is including mitigation scenarios aiming to limit the increase of global mean temperature to 2°C. We have chosen this scenario as it comply with the TCFD recommendations and because it is possible to examine both physical and transitional impacts. We use the scenario analysis to guide our climate strategy and to highlight likely financial and non-financial impacts in the future. The Scenario analysis covers our entire business from research to sales activities including value chain and customer considerations in all the countries we are operating in. Two time horizons have been considered 2030 and 2040 covering the time horizon for our midway target running to 2034 and Lundbeck's financial planning horizon of 10 years. The most important inputs are the TCFD and CDP Guidance documents, the public scenarios, National and EU climate targets and our identified risks and opportunities. For the physical scenarios, we have used the forward looking scenarios from WRI's Aqueduct atlas and WWF Water Risk Filter. We have used a top-down approach and identified the potential impact on: Carbon taxes, energy pricing, policy regulation, technology, reputation, production disruptions, supply chain disruptions, physical damage to assets and changes in demand for our products. The two key results from the scenario analysis influencing our business strategy is the expected increase in the use of carbon pricing and the banks/investors increasing use of ESG benchmarks and KPI's as a condition to obtain advantageous financing/funding. Looking at our 4 productions sites, we only pay carbon taxes at our two Danish sites. In RCP 2.6 carbon pricing is expected to increase and be used in more countries. As a part of our CO2 strategy we have since 2006 worked dedicated with energy optimizations and kept the financial risks from increased energy prices and carbon taxes low. In 2020 we signed a Power Purchase Agreement

	(PPA) on renewable electricity for our two Danish sites and in 2021 we started exploring our possibilities for PPA's in Europe and USA. PPA's make us more resilient towards carbon pricing and at the same time support the transition to renewable energy. In 2019 we increased our ambitions by signing the “Business Ambition for 1.5°C” pledge, in 2020 we had our new Science Based Target approved and in our Sustainability Report 2020 we included our first TCFD reference index. This will strengthen our possibility for improving our ratings in ESG benchmarks. 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. In 2020 Lundbeck did consider a green loan, but due to extended lead times decided against it for the current funding. In 2020 a new opportunity for sustainability linked loans occurred, favouring companies that can achieve defined ESG KPI's. In 2021 we will explore this opportunity further. Additionally, we know that good ESG rating is increasing our possibilities for attracting highly educated employees which is important for our business. Other results of the analysis are the importance of: • Securing our supply chain and cooperating with suppliers/partners about mitigating actions for transitional and physical climate changes. This also includes considerations about using requirements about e.g. use of renewable electricity. • A transition towards electrical vehicles (EV). To reach our new SBT target we prepare 2034 roadmaps for gradually convert company cars to EV's. • Being aware about society expectations to businesses to take the lead towards a more sustainable future. Our Net Zero commitment and our SBT target are important steps in this context.
RCP 4.5	The RCPs are developed by the Intergovernmental Panel on Climate Change and describe four possible climate futures, based on a wide range of possible changes to GHG emissions as a result of human activity. The RCP 4.5 predict a 2-3-degree temperature rise and will have both transitional and physical implications. RCP 4.5 is chosen as a second scenario as it probably is a more realistic scenario than the RCP 2.6. We use these scenarios to help us guide our overall climate strategy and highlight likely financial and non-financial impacts in the future. In our 2020 Sustainability report we have prepared our first TCFD reference index. The Scenario analysis covers our entire business from research to sales activities including value chain and customer considerations in all the countries we are operating in. Two time horizons have been considered 2030 and 2040 covering the time horizon for our midway target running to 2034 and Lundbeck's financial planning horizon on 10 years. The most important inputs are the TCFD and CDP Guidance documents, the public scenarios, National and EU climate targets and plans and our already identified risks and opportunities. For the physical scenarios, we have used the forward looking scenarios from WRI’s Aqueduct atlas and WWF Water Risk Filter. We have used a top-down approach and identified the potential impact on:

	Carbon taxes, energy pricing, policy regulation, technology, reputation, production disruptions, supply chain disruptions, physical damage to assets and changes in demand for our products. In RCP 4.5 we have focused on the physical scenarios as transitional risks already are covered by the RCP 2.6 scenario. The two key results from the scenario analysis that has influenced our business strategy is the expected risk for acute physical risks like exposure to extreme weather events like flooding at our partners and suppliers and physical risks at our own sites due to extreme weather events. One of our warehouse service providers located in Tennessee, USA close to a river is exposed to risk for flooding. Every year a Business Impact Analysis is prepared including factory risk assessments by our 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. Mitigating actions are being improved every year. To mitigate business interruption caused by an eventual flooding at our service provider in Tennessee, we have communicated with our service provider about securing the warehouse towards flooding and in case of an incident to minimize the impact on Lundbeck's inventory holding. Lundbeck have also implemented dual warehousing in Nevada to secure continued supply. Lundbeck's own sites are located in Europe and USA in low and medium risk areas. Nevertheless, we have experienced weather events affecting our business in minor degree. In an RCP 4.5 scenario we expect that the frequency of extreme weather events will increase and due to this we are continuously securing our own sites towards flooding and storms. As a part of our Business Impact Analysis we perform annual risk management workshops for all value-streams, and we go through insurance inspections every second year on all production sites and the four major warehouses. This forms the basis for future improvements of our sites and new facilities. E.g. we have established two catch basins at our Headquarter site and are establishing 2,850 m2 green roofs which will be able to reduce the load of the sewage system when heavy rain is occurring. Additionally, 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 from a break down at our headquarter site by 25%.

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	No	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. In Denmark the national organization for sourcing medicine to the hospitals, Amgros are planning to include environmental considerations in their choices for medicine and this could spread to other countries. In the financial sector we are already experiencing increased focus on sustainability e.g. by offering sustainability linked loans and we see the same movement in employees focus. Good climate performance is therefore becoming a prerequisite for obtaining favourable loans, be attractive to investors and be attractive to highly educated employees. By consulting our banking partners, we have been informed that we potentially can save app. 4.1 MDKK on loans and bonds by having good ESG ratings. This situation is addressed in our scenario analysis and has been one of the reasons behind our most substantial business decision in 2019 about increasing our ambition for climate actions and signing the “Business Ambition for 1.5°C” pledge. By signing the pledge, we have committed to have Net Zero emissions latest in 2050. Additionally we could in Feb 2021, announce our new approved Science Based Target running until 2034. Having high climate ambitions increases our possibility for receiving good ESG ratings and hence increases our possibilities for obtaining favourable loans and we also believe that it will make us more prepared towards future requirements from the national procurement organizations for medicine.

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 one of our warehouse service providers 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 business decision is that we have implemented dual-warehousing in Nevada to secure continued supply. Additionally, we communicate with our service provider about securing the warehouse towards flooding and in case of an incident to minimize the impact on Lundbeck's inventory holding. Time horizon: 2020 - 2040.
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. During the target period 2019 - 2034 we will cooperate with the most used CRO's and explore possibilities for reducing GHG emissions from their activities and include climate considerations as a part of our contractual requirements. Our investments in R&D can also be affected by our ability to obtain favourable financing/funding and by investors trust in our capabilities. Already today we can see there is potential for good ESG rating to have a positive financial

		impact on financing/funding for Lundbeck on two overall categories (1) Regular bank loans and (2) Corporate bonds. This situation is addressed in our scenario analysis and has been one of the reasons behind our decision about increasing our ambition for climate actions and signing the “Business Ambition for 1.5°C” pledge committing us to have Net Zero emissions latest in 2050 and the development of our new approved Science Based Target that was announced in Feb 2021 (Target period 2019 - 2034).
Operations	Yes	Lundbeck's operations can be affected by both transitional changes like reputation, increasing energy prices and carbon taxes and by damaging weather events like storms and 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 raising our ambitions for CO2 reductions. The most substantial business decision was to sign a Power Purchase Agreement (PPA) for additional renewable energy covering the entire electricity consumption at our two Danish sites from 2022. During 2021 we will explore our possibilities for having our European and USA sites covered by similar PPA's with renewable electricity. This is a contribution to achieving our new Science Based Target (SBT) that was announced in Feb 2021. The new SBT target running until 2034 will also influence our scope 1 emissions where e.g. increased use of bio-fuel and increased use of electrical vehicles as company cars is expected to be implemented. Physical risks are continuously being evaluated via our Business Interruption Analysis process and mitigating actions like establishing of catch basins at our headquarter sites are continuously being improved. In 2020 we established 2850 m2 green roofs at some buildings at our headquarter site. This will reduce the load of the sewage system and make our site more resilient when heavy rain is occurring. Green roofs is also included in the building project for a new building for animal facilities and research that will be constructed during the next 1 – 4 years. Additionally 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.

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 Capital allocation	Indirect costs and capital allocation: Lundbeck's indirect costs are impacted by changes in energy prices and carbon taxes and due to the increased awareness like e.g. the European Green Deal and the RCP 4.5 scenario we expect that energy prices and carbon taxes will increase and spread to more countries during the next 10 years. The most important method to keep the financial risks from increased energy prices and GHG taxes low, is our climate strategy and our focus on year on year energy optimizations. Due to this focus we have reduced our annual electricity costs with app. 25 MDKK since 2006. In 2020 we spent 10.2 MDKK on energy saving projects and we will continue to explore our possibilities for making our sites more energy efficient. The current situation with low energy prices and the emerging options for Power Purchase Agreements (PPA's) have created a good opportunity for Lundbeck to allocate capital into a long-term (7-year) PPA agreement including additional renewable electricity to the grid and a low fixed energy price. By the end of 2020 we signed this PPA which will cover the entire electricity consumption at our two Danish sites and reduce our annual electricity cost with app. 1 MDKK. The cost for developing the PPA is estimated to 529,000 DKK for internal resources and consultancy cost. Entering a PPA is also a strong and important contribution to Lundbeck's climate targets and to our commitment to the “Business Ambition for 1.5°C” pledge. During the next 1 - 5 years we will explore our possibilities for entering a PPA in Europe covering our European electricity consumption and a PPA in USA covering our consumption in USA. Long-term (7 – 10 years) PPA's with renewable energy will make us more resilient to increased energy prices and carbon taxes. Internal costs for developing and achieving our climate ambition and targets are also included in our financial planning. In 2020 we improved and updated our scope 3 inventory and submitted a new Science Based Target. This is increasing our indirect cost with app. 1,2 MDKK for internal resources and consultancy services. Other regulations like Good Documentation Practice (GDP) is also affecting our indirect costs. GDP refers to the regulatory guidelines governing the wholesale distribution of medicinal products to ensure their quality and integrity is maintained throughout the supply chain from the manufacturer to the end user. These requirements are at the moment being tightened with new temperature requirements during

		distribution of the medicinal products from the manufacturer to the end user. This means that we will have to increase the number of transports with active cooling during transportation, increasing the energy consumption for transportation. Estimation of the financial impact is still ongoing but is estimated to increase the cost for these transports with 10 - 15 MDKK annually, a significant increase to the previous cost on app. 30 MDKK. Potential supply chain interruptions are also affecting our indirect costs. Every year a Business Impact Analysis is prepared and factory assessments for our most important partners establishing an overview of the most critical areas including climate risks in our supply chain. E.g. we have a partner in Japan, that are situated in a medium-high risk area for flooding. As a mitigating action this partner has decided to validate a second source production outside Japan making the supply more resilient to increased sales and breakdown. This is impacting our indirect costs via the resources we are using for preparing these analyses and for performing audits at suppliers and partners but also our insurance premium are decided based on the result of these analysis. To indicate a size we can use the annual cost for our Property and Business Interruption insurance on 5.7 MDKK and the annual cost of audits at suppliers and partners on app 4.2 MDKK. Assets and Capital expenditure: Our assets have already 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 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 neighbouring companies. Both basins were gradually implemented over a 4-year period and integrated in the financial planning process. Another example is the establishment of app. 2,850 m2 of green roofs which will reduce the load of the sewage systems in heavy rain situations. The additional cost for green roofs compared to roofing felt is 627,000 DKK and is included in our financial planning. When buildings are renovated, or new buildings are constructed energy considerations and climate risks are always integrated in the decision process for sustainable solutions and design. At the moment, an old factory building at our Italian site is being strongly renovated and new energy efficient solutions are implemented in the new design. Additionally, this site is planning to install solar panels at some of the buildings on the site. Cost and capacity of the panels are currently being explored. Another example is the installation of a new exhaust air emission system (RTO) in 2020 at our chemical site in Denmark. This system will be

		installed solely due to new environmental legislation. To reduce the operating costs, the fuel for the system will partly consist of our own solvent waste and partly newly purchased fuel, reducing fuel costs and costs for waste handling. This moves our CO2 emissions from waste handling in scope 3 to direct scope 1 emissions from our factory but reduces our total emissions. This new air emissions system is expected to require an investment on up to 20 MDKK. 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.

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

We expect that our access to capital will be influenced by our climate performance during the next 5 years. By having high ambitions and performing well on climate Lundbeck has the opportunity to receive better scoring in ESG benchmarks and other scoring tools used by banks and investors. In 2019 we experienced a potential for good ESG rating to 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 we increase our possibilities for advantageous loans and investments by having a good climate performance. In 2020 another opportunity for changing existing loans to sustainability linked loans appeared. By achieving defined ESG KPI's interests can be reduced. This opportunity is being explored further in 2021. These opportunities are contributing to our belief about the importance of having high sustainability ambitions. Both our signing of the “Business Ambition for 1.5°C” pledge and our new approved Science Based Target announced in Feb 2021 are defining our path.

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

2016

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)

Base year

2010

Covered emissions in base year (metric tons CO2e)

38,784

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2020

Targeted reduction from base year (%)

45

Covered emissions in target year (metric tons CO2e) [auto-calculated]

21,331.2

Covered emissions in reporting year (metric tons CO2e)

14,712

% of target achieved [auto-calculated]

137.9262926293

Target status in reporting year

Achieved

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 (including target coverage)

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. Our sales affiliates are not covered by the target. Our sales affiliates constitute app. 5% of our total GHG emissions.
As this target ended in 2020, we have developed a new Science based target during

2020. The new Science Based Target have been approved by Science Based Targets initiative and was announced in February 2021.

Target reference number

Abs 2

Year target was set

2019

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)

Base year

2019

Covered emissions in base year (metric tons CO2e)

17,011

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2020

Targeted reduction from base year (%)

4

Covered emissions in target year (metric tons CO2e) [auto-calculated]

16,330.56

Covered emissions in reporting year (metric tons CO2e)

14,712

% of target achieved [auto-calculated]

337.8696137793

Target status in reporting year

Achieved

Is this a science-based target?

Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

Apart from our 10-year Science Based Target we have this supporting annual target. A 4% annual reduction will secure the realization of our long-term target, and a 4% annual reduction complies with the required annual reduction in the Absolute contraction method (well below 2°C ambition). Therefore, we consider the target to be science based.

Target reference number

Abs 3

Year target was set

2019

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)

Base year

2016

Covered emissions in base year (metric tons CO2e)

21,621

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2035

Targeted reduction from base year (%)

70

Covered emissions in target year (metric tons CO2e) [auto-calculated]

6,486.3

Covered emissions in reporting year (metric tons CO2e)

14,712

% of target achieved [auto-calculated]

45.6500624393

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

On top of our 10 year target, we have prepared this long-term target covering our scope 1 and 2 emissions company wide. This 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. Our sales affiliates are not covered by the target. Our sales affiliates constitute app. 5% of our total GHG emissions.
In 2035 all our use of city gas, district heating and electricity will be based on renewable energy sources. Additionally, we continuously look for possibilities to increase our conversion from gas oil and methane gas to renewable energy sources. Today 93% of our oil consumption at our Danish chemical site is bio oil.
A 70% reduction from 2016 - 2035 require a 3.7% annual reduction which more than fulfil the required annual reduction in the Absolute contraction method (well below 2°C ambition). Therefore, we consider the target to be science based.

C4.2

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

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

C4.2b

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

Target reference number

Oth 1

Year target was set

2018

Target coverage

Other, please specify

Engage with 2/3 of the biggest upstream suppliers by emission and all downstream transportation suppliers (211 suppliers in all) to motivate them to develop ambitious climate targets by 2026.

Target type: absolute or intensity

Absolute

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

Engagement with suppliers

Percentage of suppliers setting emissions reduction targets

Target denominator (intensity targets only)

Base year

2016

Figure or percentage in base year

0

Target year

2026

Figure or percentage in target year

139

Figure or percentage in reporting year

40

% of target achieved [auto-calculated]

28.7769784173

Target status in reporting year

Underway

Is this target part of an emissions target?

This target is our first scope 3 target and include all our significant suppliers by emission (up- and downstream). At the moment 211 suppliers are included in our target and 40 suppliers had climate targets in 2020.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

The target is an engagement target and not a part of our absolute emission targets. As we signed the “Business Ambition for 1.5°C” in Dec 2019 and announced a new approved Science Based Target in Feb 2021, this target will be replaced by the new Science Based Target. In our new Science Based Target we will reduce emissions from 67% of our scope 3 emissions by 19% running from 2019 to 2034.

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

Not applicable

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 (including target coverage)

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 from our entire business (scope 1, 2 and 3) including using carbon removal credentials for any residual emissions by no later than 2050.

During 2020 we developed an updated and improved carbon footprint which created a foundation for selecting what areas that constitute most of our footprint and therefore the first areas we will explore decarbonization initiatives. Based on the updated Carbon footprint we prepared and submitted a new midway Science Based Target (1.5°C ambition) with baseline in 2019 and target year in 2034. This target was approved by Science Based Targets initiative and following announced in Feb 2021. This new Science Based Target is linked to our Net Zero target.

During 2021 our possibilities for decarbonization will be explored further, planned and ready for implementation beginning in 2022.

When Science Based Targets initiatives guideline for Net Zero targets have been finalized we will consider to apply for an approval of our Net Zero target.

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	3	
To be implemented*	9	530
Implementation commenced*	7	3,643
Implemented*	4	411

Not to be implemented	6	

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
Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)

377

Scope(s)

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

Installation of new chillers due to ordinary maintenance of production facilities. Payback time is less than a year due to that we received a national donation at our French site, covering the full investment.

Initiative category & Initiative type

Energy efficiency in buildings
Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)

30

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
200,000

Investment required (unit currency – as specified in C0.4)
1,200,000

Payback period
4-10 years

Estimated lifetime of the initiative
11-15 years

Comment
Heat recovery from compressed air.

Initiative category & Initiative type
Energy efficiency in production processes
Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)
3

Scope(s)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
10,000

Investment required (unit currency – as specified in C0.4)
70,000

Payback period
4-10 years

Estimated lifetime of the initiative
11-15 years

Comment
Installation og new cooling tower.

Initiative category & Initiative type
Energy efficiency in buildings

Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)

1

Scope(s)

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)

1,485,400

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

This project was financed by a national donation that covered the entire investment. The project was a change of fan motors.

C4.3c

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

Method	Comment
Other Our GHG reduction targets and climate ambitions are a strong driver for our emission reduction activities	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 emissions by latest 2050. In 2020 we developed a New Science Based Target which was approved by Science Based Targets initiative and announced in Feb 2021. Both our 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 a long-term agreement (7 years) covering the entire electricity consumption of our two Danish sites. During 2021 we will explore our possibilities for entering similar PPA agreements in Europe and in USA covering our consumption

	respectively in Europe and USA.
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 new 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 1 MDKK/year. 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 will run fully in 2021 at our chemical site in Denmark and be implemented at our chemical site in Italy in 2021. 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, is the development of our improved carbon footprint and the development of our new Science Based Target during 2020 a part of selected employees and managers bonus scoring. 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. Our compliance with the Science Based Targets initiative criteria and alignment with the Paris agreement are also strong drivers for investing in emission reduction activities both at our own sites and at our suppliers.
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 2020 the implementation of our energy projects cost 10.2 MDKK.
Internal price on carbon	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. 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 2020 the investment for two energy projects reducing emissions with 3778 tons CO2/year were covered entirely by national grants. This system makes it possible to change to energy efficient equipment at a faster pace. Additionally, 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.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

No

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO2e)

24,954

Comment

Our long-term science based approved target commits Lundbeck to cut our scope 1 + 2 CO2 emissions 45% by 2020 when compared to 2010 emission levels.
In 2019 another long-term target was adopted with base year in 2016: In 2035 Lundbeck will reduce our scope 1 + 2 CO2 emissions by 70% compared to 2016.

Lundbeck had a big change in our methodology and boundary used to calculate our emission. Hence we have made a recalculation of base year emissions. The changes in the new boundary/method is this:

1: CO2 emissions from 4 affiliates (3 in USA, 1 in Poland) has been included in the new inventory, as these have significant impact on the overall inventory and will be more than 5% excluded, if not taken in to account. It will increase our total scope 1 and scope 2 emissions compared to previous baseline emissions.
The baseline has been changed due to this increase in the new boundary, as two affiliates (Seattle and Deerfield, USA) was operating in 2010.

2: More data to some scope 3 categories has been added by using primary data or

generic/proxy emission factors to improve completeness of the scope 3 inventory even more.

3: General update in emission factors (scope 1 and scope 2) to use fewer sources.

Scope 2 (location-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO2e)

19,943

Comment

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

Our long-term science based approved target commits Lundbeck to cut our scope 1 + 2 CO2 emissions 45% by 2020 when compared to 2010 emission levels.
In 2019 another long-term target was adopted with base year in 2016: In 2035 Lundbeck will reduce our scope 1 + 2 CO2 emissions by 70% compared to 2016.

Lundbeck had a big change in our methodology and boundary used to calculate our emission. Hence we have made a recalculation of base year emissions. The changes in the new boundary/method is this:

1: CO2 emissions from 4 affiliates (3 in USA, 1 in Poland) has been included in the new inventory, as these have significant impact on the overall inventory and will be more than 5% excluded, if not taken in to account. It will increase our total scope 1 and scope 2 emissions compared to previous baseline emissions.
The baseline has been changed due to this increase in the new boundary, as two affiliates (Seattle and Deerfield, USA) was operating in 2010.

2: More data to some scope 3 categories has been added by using primary data or generic/proxy emission factors to improve completeness of the scope 3 inventory even more.

3: General update in emission factors (scope 1 and scope 2) to use fewer sources.

Scope 2 (market-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO2e)

13,832

Comment

Market-based CO2 emission from the use of district heating and electricity. In our targets and general reporting we use the market-based method only.

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

Our long-term science based approved target commits Lundbeck to cut our scope 1 + 2 CO2 emissions 45% by 2020 when compared to 2010 emission levels.
In 2019 another long-term target was adopted with base year in 2016: In 2035 Lundbeck will reduce our scope 1 + 2 CO2 emissions by 70% compared to 2016.

Lundbeck had a big change in our methodology and boundary used to calculate our emission. Hence we have made a recalculation of base year emissions. The changes in the new boundary/method is this:

1: CO2 emissions from 4 affiliates (3 in USA, 1 in Poland) has been included in the new inventory, as these have significant impact on the overall inventory and will be more than 5% excluded, if not taken in to account. It will increase our total scope 1 and scope 2 emissions compared to previous baseline emissions.
The baseline has been changed due to this increase in the new boundary, as two affiliates (Seattle and Deerfield, USA) was operating in 2010.

2: More data to some scope 3 categories has been added by using primary data or generic/proxy emission factors to improve completeness of the scope 3 inventory even more.

3: General update in emission factors (scope 1 and scope 2) to use fewer sources.

C5.2

(C5.2) 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)

6,260

Comment

Lundbeck have had a big structural change in our methodology and boundary used to calculate our emission in 2020.
The changes in the new boundary/method for Scope 1 is this:

1: CO2 emissions from 4 affiliates (3 in USA, 1 in Poland) has been included in the new inventory, as these have significant impact on the overall inventory and will be more than 5% excluded, if not taken in to account. This will increase our total scope 1 and scope 2 emissions compared to previous reported 2019 emissions.

2: General update in emission factors (scope 1 and scope 2) to use fewer sources.

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). 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

14,824

Scope 2, market-based (if applicable)

8,452

Comment

Lundbeck have had a big structural change in our methodology and boundary used to calculate our emission in 2020.
The changes in the new boundary/method for Scope 2 is this:

1: CO2 emissions from 4 affiliates (3 in USA, 1 in Poland) has been included in the new inventory, as these have significant impact on the overall inventory and will be more than 5% excluded, if not taken in to account. This will increase our total scope 1 and scope 2 emissions compared to previous reported 2019 emissions.

2: General update in emission factors (scope 1 and scope 2) to use fewer sources.

C6.4

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

Yes

C6.4a

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

Source

Global sales offices in Europe, Africa, Asia and North/South America are excluded. (However our sales offices at our HQ in Valby, Denmark are included).

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

Explain why this source is excluded

In general our sales offices are not included in our GHG inventory in our CO2 Strategy - hence we report them as exclusions. The emissions from sales offices are 'not relevant' to Lundbeck, as they make up an insignificant proportion of our overall emissions. Our estimate is that no more than 5% originates from energy consumption in our global sales office buildings. Data from global sales offices are (in general) not included due to the vast number of small leased office area in a greater office building making it difficult to gather Lundbeck specific data.

The sites and affiliates in scope for reporting Lundbeck HSE data 2020 are:

Chemical and Pharmaceutical Production sites ≥ 50 people must:
• Report all HSE data (valid for Valby, Lumsås, Padova and Valbonne)
Chemical and pharmaceutical production < 50 people or sites with R&D activities only:
• Report energy consumption data only (valid for La Jolla and Seattle - our 2 R&D sites

in USA)
Affiliates of administration with a floor area > 2000 m2:
• Report energy consumption data only (valid for Krakow and Deerfield - office sites in Poland and USA)

The reported scope cover >90% of Lundbeck's total values on the reported HSE KPIs and cover >50% of all Lundbeck employees. HSE data from the remaining part of the Lundbeck employees (primarily sales offices/sales reps.) are not reported, due to difficulties in retrieving and compiling these data.

In 2020 HSE data originated from 4 different sites:

1: Lundbeck headquarter, Valby, Denmark
2: Chemical production, Lumsås, Denmark
3: Chemical production, Padova, Italy
4: Pharmaceutical production, Valbonne, France

As well as 4 affiliates:

5: Seattle, USA (R&D)
6: La Jolla, USA (R&D)
7: Deerfield, USA (Office)
8: Krakow, Poland (Office)

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

Metric tonnes CO2e

117,557

Emissions calculation methodology

This category includes all upstream emissions from "Cradle to gate" products purchased or acquired by Lundbeck in the baseline year.

The category has been divided in two sub categories:
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.

Methodology 1a:
The quantity data has been obtained from Lundbeck's spend system which details materials purchased with their associated weight (in either tons or liters).
The materials were reviewed and a pragmatic approach was undertaken to match each item to an emission factor, most of which were derived from the Ecoinvent 3.0 database. For items where the weight was deemed to be of a low value, an average emission factor has been applied. For finished goods purchased as part of a CMO relationships, a proxy finished goods emission factor was applied to these. For goods measured in liters calculation has been performed to convert them into kilograms. For material items not containing a unit weight an assumption has been applied where, if possible, a similar material (where a unit weight is available) has been used as a proxy. The weight of goods have been multiplied against the appropriate emission factor to determine emissions in kgCO2e. Finally, all emissions have been converted to tCO2e.

Methodology 1b:
Lundbeck's spend data has been evaluated to ensure the spend data did not include items that have been accounted for using the quantity data (1a). This was sorted by purchasing document number. The revised spend data was inputted in the 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. Finally, all emissions have been converted to tCO2e.

The category cover 60% of total footprint and 71% of scope 3
Emission 2019: 99971 tons CO2
Emission 2020: 117557 tons CO2
Corresponds to a 18% increase, primarily due to increase in spend on CRO and consultants.

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

0

Please explain

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

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

14,401

Emissions calculation methodology

All of Lundbeck's spend data was inputted in the 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 7% of total value chain and 8% of scope 3
Emission 2019: 16533 tonnes CO2
Emission 2020: 14401 tonnes CO2
Corresponds to a 13% decrease, primarily due to annual purchase fluctuations determined by different needs for new equipment.

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

0

Please explain

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 amortised over the life of the asset. Goods expensed in the accounting year (i.e. operating expenditure or "Opex") is not included in this inventory.
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

Metric tonnes CO2e

6,474

Emissions calculation methodology

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 &2 are directly used.

The category cover 3% of total value chain and 4% of scope 3
Emission 2019: 7612 tons CO2
Emission 2020: 6474 tons CO2
Corresponds to a 15% decrease, primarily due to COVID-19 by less biooil used on site

and less need for fleet driving.

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

100

Please explain

This category 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, 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 og online meter readings. The modelling approach uses known consumption data (from the scope 1&2 calculations) multiplied by appropriate WTT and T&D emission factors.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

12,865

Emissions calculation methodology

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:
The approach undertaken was dependent on the data provided.
Lundbeck have key third party logistics suppliers. They provide emissions data on a quarterly basis. Where emission data has been provided by Lundbeck's main (centrally procured) distributors this has been added directly into the model. For some third party logistics providers, emissions data was not available for the well-to-wheel (WtW) phase of activity. For these providers The Carbon Trust has calculated assumed WtW emissions 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 (as determined by The

Carbon Trust). 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. Finally, to avoid double counting, all distributors where activity data was used as opposed to spend, were removed from the spend data.

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.
As in Category 1b, any upstream transportation emissions calculated using Lundbeck's spend data are calculated using environmental extended input-output (EEIO) analysis.

The category cover 7% of total value chain and 7% of scope 3
Emission 2019: 11872 tons CO2
Emission 2020: 12865 tons CO2
Corresponds to a 8% increase, primarily due to increase in road transport as new product has been launched requiring more driving capacity.

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

43

Please explain

5499 tons CO2 was reported directly by our major outbound third party logistics providers on air, sea and road.
This corresponds to 43%.
The rest of the emissions are calculated by using spend data and applying appropriate emission factors.

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

256

Emissions calculation methodology

Methodology
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 2019: 281 tons CO2
Emission 2020: 256 tons CO2
Corresponds to a 9% decrease, primarily due to more waste going for recycling and biological treatment.

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

100

Please explain

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

Metric tonnes CO2e

2,950

Emissions calculation methodology

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 & 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 by The Carbon Trust to account for any missing flight data and to include radiative forcing which was not included in the CWT 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 & 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 2% of total value chain and 2% of scope 3
Emission 2019: 6733 tons CO2
Emission 2020: 2950 tons CO2
Corresponds to a 56% decrease, primarily due to COVID-19 restrictions resulting in less travel activity.

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

83

Please explain

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

Metric tonnes CO2e

4,172

Emissions calculation methodology

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 2019: 3836 tons CO2
Emission 2020: 4172 tons CO2
Corresponds to a 9% increase, primarily due to more employees (300+). However it is most likely a decrease, as Lundbeck have not taken into account the limited commuting in 2020 due to working from home by COVID-19 restrictions.

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

0

Please explain

No primary data obtained directly from our employees or from their commuting patterns. Only the number of employees are primary data pulled in our internal system by Human Resources. These employee data are multiplied by emission factors.

Upstream leased assets

Evaluation status

Relevant, calculated

Metric tonnes CO2e

14,407

Emissions calculation methodology

Category 8 includes emissions associated with company car fleet, 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.

Car fleet: The emissions are based on reports from the leasing companies on company cars leased by Lundbeck. 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. Lundbeck receive CO2 report 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.
Lower emissions from our car fleet as we was pushing forward less driving and use of online marketing and sales meetings (initiated by COVID-19 travel restrictions) - adding up to 4860 tonnes less CO2 emitted by the global car fleet. One specific example is approx. 1 million liters of fuel saved in the American car fleet compared to 2019.

Property: 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.
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 7.4% of total value chain and 8.0% of scope 3
Emission 2019: 19535 tonnes CO2
Emission 2020: 14407 tonnes CO2
Corresponds to a 26% decrease, primarily due less fuel used for the company car fleet (COVID-19 travel restrictions and use of online sales and marketing alternatives).

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

40

Please explain

Car fleet: The emissions are based on reports from the leasing companies on company cars leased by Lundbeck. 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).
Property: Only spend data is used and converted to emission data by use of EEIO emissions factors.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

776

Emissions calculation methodology

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 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 county 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.

The category cover 0.4% of total value chain and 0.4% of scope 3
Emission 2019: 721 tons CO2
Emission 2020: 776 tons CO2
Corresponds to an 8% increase, primarily due to annual fluctuations, new product launch and 12% more finished goods production.

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

0

Please explain

No primary date obtained by suppliers or value chain partners.

Processing of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

5,547

Emissions calculation methodology

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&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.

The category cover 3% of total value chain and 3% of scope 3
Emission 2019: 6859 tons CO2
Emission 2020: 5547 tons CO2
Corresponds to a 19% decrease, primarily due to annual fluctuations in production mix and sales patterns.

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

0

Please explain

No primary date obtained by suppliers or value chain partners.

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-minimis. Therefore this category has been excluded from the Scope 3 inventory.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

654

Emissions calculation methodology

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 tonnes 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.

The category cover 0.3% of total value chain and 0.4% of scope 3
Emission 2019: 567 tonnes CO2
Emission 2020: 654 tonnes CO2
Corresponds to a 15% increase, primarily due to 12% more finished goods production.

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

0

Please explain

No primary date obtained by suppliers or value chain partners.

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

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&2. These investments are most often either:
• Minority shareholdings in companies not accounted for using the accounting boundary chosen for Scope 1&2.

• General portfolio investments utilising 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 upstream 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	338	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

0.0000008325

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

14,712

Metric denominator

unit total revenue

Metric denominator: Unit total

17,672,000,000

Scope 2 figure used

Market-based

% change from previous year

16.6

Direction of change

Decreased

Reason for change

A decrease of 16.6 % - partly due to one emission reduction initiatives:

1: More biooil (up 43.9 %) used instead of gasoil (down 717%), as the biooil boiler was under maintenance in 2019 and more gasoil had to be used in the backup gasoil burner. This is now corrected and the optimization of the biooil burner adjusted accordingly, providing a CO2 reduction of 639 tons CO2. Gasoil has a 9 times higher emission factor than biooil. Hence biooil is preferred.

The rest of the reduction is due to more revenue (3,7%) and lower CO2 emission factors in 2020 compared to 2019 driving the intensity figure down as well.

Data in 2019 was:
17012 tons gross global combined Scope 1 and 2 emissions
Revenue: 17,036 000000 million DKK.
Intensity figure = 0.0000009986

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	6,256	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	4	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Denmark 1	2,312
Italy 2	2,516
France 3	1,126
United States of America 4	307
Poland	0

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	1,653	55.658035	12.516765
Site Lumsås, Denmark	659	55.94317	11.512057
Site Padova, Italy	2,516	45.410201	11.926138
Site Elaiapharm, France	1,126	43.628082	7.051954
Affiliate - La Jolla, USA	103	32.902291	-117.236373
Affiliate - Seattle, USA	204	47.763859	-122.181455
Affiliate - Deerfield, USA	0	42.165547	-87.879638
Affiliate - Krakow, Poland	0	50.087748	19.976176

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Biooil	338
Methane	3,949
Gasoil	261
F -gas (LPG)	53
Town gas	1,640
HFC (R134a)	4
Emergency diesel for generators	16

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)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Denmark	10,087	4,405	36,268	28,894

Italy	2,373	2,379	7,256	1,437
France	319	373	6,784	482
United States of America	1,367	658	2,872	574
Poland	678	636	702	77

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). 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.	7,705	3,454
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.	2,382	951
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.	2,373	2,379
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.	319	373
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.	379	164

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.	458	82
Affiliate - Deerfield, USA Purchaced electricity only. Self generated heat and cooling is made by use of electricity. 20% renewable electricity in the grid.	530	412
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.	678	636

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	13,426	7,301
Purchased district heating	1,398	1,151

C7.9

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

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable	639	Decreased	3.8	The change in emissions in renewable energy is due to change in the use of biooil.

energy consumption				Biooil: A by-product from the production of sunflower- and rapeseed oil and used for heat/steam at Site Lumsås, Denmark. 11800 MWH biooil was used in 2020 compared to 8201 MWh in 2019. As 3599 MWh more biooil was used in 2020, this consequently saved the use of gasoil. Compared to 2019 the use of gasoil decreased by 73.1% and the use of biooil increased by 43.9%. Resulting in a total of 639 tons reduction in CO2 emission. Having maintenance issues and technical problems with the biooil boiler in 2019, Lundbeck had to use gasoil as primary fuel for a period of time. The emission factor for gasoil is 9 times higher than biooil - hence having emitted more CO2 in the process. As this was not the issue in 2020, the use of biooil has increased - hence saving 639 tons of CO2 in the process. This corresponds to 3.8% reduction. Formula: ((-639/17012)*100) = -3.8 ((change in scope 1+2 emissions attributed change in renewable energy consumption)/(previous year scope 1+2 emissions)*100).
Other emissions reduction activities	411	Decreased	2.4	The change in emissions due to other reduction activities is attributed to proactive emission reduction initiatives at our production sites. In 2020 Lundbeck implemented several energy conserving initiatives and hence lowered our energy consumption by 2552 MWh. These initiatives was based on a 10 million DKK investment. For instance, we optimized our chillers at our site in France and achieved an annual saving on 2052 MWh in methane gas. At our site in Denmark we initiated heat recovery from compressed air and saved 455 MWh in district heating.

				Total decrease in CO2 due to energy projects is: 411 tons CO2. This corresponds to 2.4 % reduction. Formula: ((-411/17012)*100) = -2.4 ((change in scope 1+2 emissions attributed to other emission reduction activities)/(previous year scope 1+2 emissions)*100).
Divestment	0	No change	0	Not relevant for Lundbeck in 2020.
Acquisitions	0	No change	0	Not relevant for Lundbeck in 2020.
Mergers	0	No change	0	Not relevant for Lundbeck in 2020.
Change in output	515	Increased	3	The change in emissions due to change in output is attributed to 11.6 % more finished goods production in 2020 compared to 2019. 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 1120 MWh was consumed in 2020 compared to 2019. A total of 515 tons CO2. This corresponds to 3.0 % increase. Formula: ((515/17012)*100) = 3.0 ((change in scope 1+2 emissions attributed to other emission reduction activities)/(previous year scope 1+2 emissions)*100).
Change in methodology	2,815	Decreased	16.5	The change in emissions due to change in methodology is primarily attributed to change in emission factors: Scope 1: Due to our new climate strategy and inventory calculations, scope 1 emission factors has been assessed, updated and less sources are now used. The primary source is DEFRA. This update has changed most of the the

				factors slightly. Emission factors from 4 affiliates are now part of the total inventory and has also been added. Scope 2: Primarily due to the ever increasing part of sustainable energy in the grid (electricity and district heating). Emission factors from 4 affiliates are now part of the total inventory and has also been added. Total reduction due to changed CO2 factors in 2020 is: 2815 tons CO2. This corresponds to 16.5% reduction. Formula: ((-2815/17012)*100) = - 16.5 ((change in scope 1+2 emissions attributed to change in methodology)/(previous year scope 1+2 emissions)*100).
Change in boundary	0	No change	0	The change in boundary due to 4 affiliates being added to the inventory in 2020. However baseline and 2019 has been adjusted with the emission data applicable for the affiliates in 2019. This results in no actual change in boundary in 2020. The CO2 emission from the 4 affiliates combined constitute 10.9% of our total CO2 emission in 2020 and 9.9% in 2019. This change is already captured in "Change in output" and "Change in methodology".
Change in physical operating conditions	0	No change	0	Not relevant for Lundbeck in 2020.
Unidentified	1,058	Increased	6.2	Total reduction in CO2 emission from 2019 to 2020 was 13.5%. 19.7% is accounted for in the above. The difference (19.7-13.5) is a 6.2% increase and is not identified. This corresponds to 1058 tonnes of CO2.

				Formula: ((1058/17012)*100) = 6.2 ((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 explain the actual reason for this quite big unidentified emission.
Other	0	No change	0	Not relevant for Lundbeck in 2020.

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)	Unable to confirm heating value	11,800	35,043	46,843
Consumption of purchased or acquired electricity		21,969	19,583	41,552
Consumption of purchased or acquired heat		9,516	2,814	12,330
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		43,285	57,440	100,725

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.

Fuels (excluding feedstocks)
Diesel

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
66

MWh fuel consumed for self-generation of electricity
66

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

Emission factor
0.24462

Unit
metric tons CO2e per MWh

Emissions factor source
DEFRA: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019

Comment
Diesel used for testing and running our emergency generators.

Fuels (excluding feedstocks)
Town Gas

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
12,239

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

12,239

Emission factor

134

Unit

metric tons CO2e per MWh

Emissions factor source

Our supplier HOFOR: http://www.hofor.dk/baeredygtige-byer/beregn-co2/miljoedeklaration-bygas-2/

Comment

Used at our site i Valby Denmark. 100% for steam production. Heat originates from District heating.

Fuels (excluding feedstocks)

Vegetable Oil

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

11,800

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

4,720

MWh fuel consumed for self-generation of steam

7,080

Emission factor

2,806

Unit

metric tons CO2e per MWh

Emissions factor source

https://nlmv.dk/ Our contact at NLM Vantinnge (Supplier of biooil) provides the annual emission factor. Proof of sustainability (document) provided by the supplier NLM Vantinge. The document is a reference to calculations by Energistyrelsen (Danish Energy Agency): https://ens.dk/sites/ens.dk/files/CO2/standardfaktorer_for_2019.pdf

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.

Fuels (excluding feedstocks)

Methane

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

21,476

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

8,590

MWh fuel consumed for self-generation of steam

12,886

Emission factor

0.18385

Unit

metric tons CO2e per MWh

Emissions factor source

DEFRA: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019

Comment

40% for heat and 60% for steam.
Used at our production sites in Valbonne, France and Padova, Italy as well as our affiliates in Seattle, USA an La Jolla, USA.

Fuels (excluding feedstocks)

Liquefied Petroleum Gas (LPG)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

246

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

100

MWh fuel consumed for self-generation of steam

0

Emission factor

0.21447

Unit

metric tons CO2e per MWh

Emissions factor source

DEFRA: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019

Comment

Used for production of heat only at site Lumsås.

Fuels (excluding feedstocks)

Gas Oil

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

1,016

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

406

MWh fuel consumed for self-generation of steam

610

Emission factor

0.25676

Unit

metric tons CO2e per MWh

Emissions factor source

DEFRA: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019

Comment

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

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	66	66	0	0
Heat	13,962	13,962	4,720	4,720
Steam	32,815	32,815	11,474	11,474
Cooling	12,466	12,466	6,594	6,594

C8.2e

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

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Denmark

MWh consumed accounted for at a zero emission factor

19,413

Comment

Electricity:
Purchased and consumed low-carbon electricity in Denmark originates from grid mix. 80% of the electricity in 2020 originates from renewable energy sources (wind mills, solar, water, biogas).

Cooling:
Purchased and consumed low-carbon electricity in Denmark originates from grid mix. Estimated 30% of electricity is used for cooling.

80% of the electricity in 2020 originates from renewable energy sources (wind mills, solar, water, biogas).

Valby and Lumsås:
Emission factor: 0.149 tonnes CO2 pr. MWh
Source: Energinet - https://energinet.dk/El/Gron-el/Miljoedeklarationer

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Italy

MWh consumed accounted for at a zero emission factor

1,437

Comment

Electricity:
Purchased and consumed low-carbon electricity in Italy originates from grid mix. 19,81% of the electricity in 2020 originates from renewable energy sources (wind mills, solar, water, biogas).

Cooling:
Purchased and consumed low-carbon electricity in Italy originates from grid mix. Estimated 30% of electricity is used for cooling. 19,81% of the electricity in 2020 originates from renewable energy sources (wind mills, solar, water, biogas).

Padova:
Emission factor: 0.3279 tonnes CO2 pr. MWh
Source: EON - pdf: DICHIARAZIONE CONSOLIDATA Di CARATTERE NON FINANZIARIO 2019 che comprende anche il Rapporto di Sostenibilità 2019: alla pagina 32, ultima riga della tabella, è riportato che l'energia prodotta da Edison (rinnovabili incluse) ha avuto emissioni pari a 0,3279 tonCO2 / MWh.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

Country/area of consumption of low-carbon electricity, heat, steam or cooling

France

MWh consumed accounted for at a zero emission factor

482

Comment

Electricity:
Purchased and consumed low-carbon electricity in France originates from grid mix.
7,1% of the electricity in 2020 originates from renewable energy sources (wind mills, solar, water, biogas).
However most electricity is produced by nuclear resulting in a a very low CO2 emission factor.

Cooling:
Purchased and consumed low-carbon electricity in France originates from grid mix.
Estimated 30% of electricity is used for cooling. 7,1% of the electricity in 2020 originates from renewable energy sources (wind mills, solar, water, biogas).

Valbonne:
Emission factor: 0.055 tonnes CO2 pr. MWh
Source: EDF - https://www.edf.fr/en/the-edf-group/taking-action-as-a-responsible-company/our-six-corporate-responsibility-goals/doing-even-more-to-reduce-co2-emissions

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Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

Country/area of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

574

Comment

Electricity:
Purchased and consumed low-carbon electricity in USA originates from grid mix.
20% of the electricity in 2020 originates from renewable energy sources (wind mills, solar, water, biogas).

Cooling:
Purchased and consumed low-carbon electricity in USA originates from grid mix.

Estimated 30% of electricity is used for cooling. 20% of the electricity in 2020 originates from renewable energy sources (wind mills, solar, water, biogas).

La Jolla:
Emission factor: 0.206 tonnes CO2 pr. MWh
Source: Carbon Footprint - https://www.carbonfootprint.com/docs/2019_06_emissions_factors_sources_for_2019_electricity.pdf

Seatlte:
Emission factor: 0.0852 tonnes CO2 pr. MWh
Source: Carbon Footprint - https://www.carbonfootprint.com/docs/2019_06_emissions_factors_sources_for_2019_electricity.pdf

Deerfield:
Emission factor: 0.3701tonnes CO2 pr. MWh
Source: Carbon Footprint - https://www.carbonfootprint.com/docs/2019_06_emissions_factors_sources_for_2019_electricity.pdf

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Poland

MWh consumed accounted for at a zero emission factor

43

Comment

Electricity:
Purchased and consumed low-carbon electricity in Poland originates from grid mix. 16,9% of the electricity in 2020 originates from renewable energy sources (wind mills, solar, water, biogas).

Cooling:
Purchased and consumed low-carbon electricity in Poland originates from grid mix. Estimated 30% of electricity is used for cooling. 16,9% of the electricity in 2020 originates from renewable energy sources (wind mills, solar, water, biogas).

Krakow:

Emission factor: 0.73404tonnes CO2 pr. MWh
Source: Tauron - https://www.tauron.pl/tauron/o-tauronie/struktura-paliw

Sourcing method
Heat/steam/cooling supply agreement

Low-carbon technology type
Biomass

Country/area of consumption of low-carbon electricity, heat, steam or cooling
Denmark

MWh consumed accounted for at a zero emission factor
9,482

Comment
Heat:
Purchased and consumed low-carbon heat in Denmark originates from grid mix in district heating.
79% of the district heating in 2020 originates from renewable energy sources (hay, biomass, organic waste, wood pellets).

Valby:
Emission factor: 0.0658 tonnes CO2 pr. MWh
Source: HOFOR - https://www.hofor.dk/wp-content/uploads/2020/07/Miljødeklaration-for-fjernvarme-1990-2019_Endelig-biobraendsler-opdaterede-tabeller_010720.pdf

Sourcing method
Heat/steam/cooling supply agreement

Low-carbon technology type
Biomass

Country/area of consumption of low-carbon electricity, heat, steam or cooling
Poland

MWh consumed accounted for at a zero emission factor
34

Comment
Heat:
Purchased and consumed low-carbon heat in Poland originates from grid mix in district heating.
10.4% of the district heating in 2020 originates from renewable energy sources (hay, biomass, organic waste, wood pellets).

Krakow:

Emission factor: 1.1 tonnes CO2 pr. MWh
Source: PGE- https://pgeenergiaciepla.pl/spolki-i-oddzialy/elektrocieplownie/PGE-Energia-Ciepla-Oddzial-nr-1-w-Krakowie

C9. Additional metrics

C9.1

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

Description
Waste

Metric value
7,308

Metric numerator
Tonnes of solvents recovered

Metric denominator (intensity metric only)

% change from previous year
66.1

Direction of change
Increased

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 2020, we are proud to report that we achieved the target of internal recycling 55% of the solvents used in chemical production.

In 2020 Lundbeck recovered 7308 tons solvents (in 2019 we recovered 4400 tons). Consequently saved CO2 from additional resources used for external production, transportation and waste management. The setup has changed from 2019 reporting, as all solvents used in chemical production is now in scope. Both solvents recovered on-site (internal recovery) and by external company (external recovery). In 2019 only the 10 most used solvents (internal recovery) was in scope. This makes it a bit hard to compare the change from previous year, as the scope and boundary has changed in 2020 accounting. But looking at the reported numbers the change is 66.1 % increase when comparing 2019 to 2020.

Our target for 2021 is to recycle 60% of the solvents used in chemical production in

Denmark and Italy.

Description

Energy usage

Metric value

338

Metric numerator

Tons CO2 from liters of biooil consumed

Metric denominator (intensity metric only)

% change from previous year

43.9

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. 43.9% more biooil (3599 MWh) was used in 2020 compared to 2019. This is due to more gasoil used in 2019. By using more biooil and less gasoil we reduce the emission of CO2.
Having maintenance issues and technical problems with the biooil boiler in 2019, Lundbeck had to use gasoil as primary fuel for a period of time. The emission factor for gasoil is 9 times higher than biooil - hence having emitted more CO2 in the process. As this was not the issue in 2020 the use of biooil has increased 40,9%, but the use of gasoil decreased by 73.1% - hence saving 639 tons of CO2 in the process.

The emission factor for biooil is provided by the supplier and is the same for 2020 and 2019 (0,0286 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

Page/ section reference

1: Verification from PwC. See page 1-2. Attachment: "Lundbeck 2020 - CDP verification template PwC completed"
2: Sustainability Report. See page 28-31. Attachment: Lundbeck_Sustainability_Report_2020_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

Page/ section reference

1: Verification from PwC. See page 1-2. Attachment: "Lundbeck 2020 - CDP verification template PwC completed"
2: Sustainability Report. See page 28-31. Attachment: Lundbeck_Sustainability_Report_2020_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: 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

Page/section reference

1: Verification from PwC. See page 1-2. Attachment: "Lundbeck 2020 - CDP verification template PwC completed"
2: Sustainability Report. See page 28-31. Attachment: Lundbeck_Sustainability_Report_2020_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	2019: 17012 tons CO2. 2020: 14712 tons CO2. Change: 13.5 % decrease compared to 2019. Reason for decrease is due to more biooil used (instead of fuel oil) and lover emission factors in general. PwC have included Scope 1, Scope 2 and Scope 3 (business travel), in our verification statement, but not the year on year movements 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. The change is reported in our annual Sustainability report (page 20). The data in the Sustainability report is verified by PwC (page 28-31. Attachment: Lundbeck_Sustainability_Report_2020_WEB_upd.pdf).
C8. Energy	Energy consumption	ISAE3000	2019: 99605 MWh. 2020: 100725 MWh. Change: 1.1 % increase compared to 2019. Reason for increase is due to production mix. PwC have included Scope 1, Scope 2 and Scope 3

			(business travel), in our verification statement, but not the year on year movements 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. The change is reported in our annual Sustainability report (page 20). The data in the Sustainability report is verified by PwC (page 28-31. Attachment: Lundbeck_Sustainability_Report_2020_WEB_upd.pdf). 1, 2

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

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, 2020

Period end date

December 31, 2020

% of total Scope 1 emissions covered by tax

12

Total cost of tax paid

949,736

Comment

In Denmark we pay carbon tax for several energy sources. For Lundbeck it means that we pay tax for our use of city-gas, gasoil and F-gas.
Additionally we pay a carbon tax for district heating, but this is not included in the above Total cost of tax paid, as it is in scope 2.

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, but our activity in France is not covered by the French tax (ref. according to criteria defined in Article 10a (16) (b) of Directive 2003/87 / C NACE code 2120 / Manufacture of pharmaceutical preparations). The carbon tax is included in our energy invoices and payed automatically together with these invoices. Several scenarios predict that carbon taxes will increase and be introduced in more countries. Hence, we are looking into a future with increasing cost for fossil-based fuels. Our strategy to minimize the impact from increasing carbon price schemes is to move away from fossil based fuels to energy based on renewables. Several years ago we replaced a large boiler using fuel oil with a new boiler using bio oil at our Chemical site in DK. In the years to come we will explore our possibilities for exchanging our use of ordinary methane gas at our sites in France and Italy to renewable methane gas. At our headquarter site we expect that during the next 5 years the district heating will be produced by renewable sources and the city gas will be replaced with bio gas. 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. Looking forward we will explore our possibilities for similar agreements for our electricity consumption in EU and USA. 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, 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 favoured. 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, making it possible to implement large energy projects much earlier than otherwise. Also, at our French site, it is in the Engineering department the projects are identified and rolled out. In 2020 two energy projects were financed by national grants.

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 changing every year depending on the contract with our supplier. In 2020 the sum provided was 300 DKK/MWh saved. This corresponds to 4,550 DKK/ton CO2 saved.
In France the received national grant corresponds 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 favoured over other activities because a projects payback time has large influence on a projects possibility for being implemented. In 2020 we sold the 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 2020 two energy projects were implemented due to the provided national grants reducing emissions with 378 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.

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 in all our business cases when assessing new energy reducing projects. In 2019 this common business case model was developed formalizing the approach of using CO2 as a decision making factor. Currently CO2 reductions are rated higher than pay back times in the model increasing the change for energy projects to be preferred over other projects. 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

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change
Climate change performance is featured in supplier awards scheme

% of suppliers by number

20

% total procurement spend (direct and indirect)

32

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

72

Rationale for the coverage of your engagement

Engage with 2/3 of the biggest upstream suppliers by emission and all downstream transportation suppliers (211 suppliers in all) to motivate them to develop ambitious climate targets by 2026. This target is our first scope 3 target and include all our significant suppliers by emission (up- and downstream). 211 suppliers are included in our target - 40 suppliers had climate targets in 2020. The target is an engagement target and not a part of our absolute emission targets.
As we signed the “Business Ambition for 1.5°C” in Dec 2019 and announced a new approved Science Based Target in Feb 2021, this target is replaced by the new Science Based Target. In our new Science Based Target we will reduce emissions from 67% of our scope 3 emissions by 19% running from 2019 to 2034.
Going forward we will address only the new SBT reduction target in this section.

Rationale for engagement: Direct involvement by Lundbeck of the biggest emitters of CO2. Purchased goods and services is the biggest category with 72% of total scope 3 emission. 4 supplier categories (raw materials for production, packaging materials, CMO and CRO/Consultants) are chosen. They cover 20% of the total suppliers - but 32% of total spend (49 % of total scope 3 inventory in 2020).

METHODE/CASE STUDY: In 2020 Lundbeck send a survey to 24 selected suppliers in the four categories. They were selected based on having the highest CO2 emission and highest spend of the category. Asked to share information on carbon footprint, target setting and specific emission data related to the product and services provided to Lundbeck. The aim was to assess the maturity and readiness of our suppliers and the availability to provide CO2 data and specific emission factors for their product and services provided to Lundbeck (e.g. based on Life Cycle Assessment -LCA). High quality and more precise emission factors are crucial to calculate Lundbeck's progress against our emission reduction target.

STRATEGY: Lundbeck will motivate our suppliers to develop ambitious climate targets. The information will be used in a supplier awards performance criteria for selecting potential new suppliers, in target setting and scope 3 emission calculation (more precise emission factors and no use of proxy factors). Ongoing cooperation with the suppliers to develop a more general engagement model to cover more suppliers in the scope.

Impact of engagement, including measures of success

Lundbeck's approved Science based Target is to reduce our scope 3 emissions by 19% by 2034 (base year 2019). This is an absolute reduction target and part of our absolute emission targets of net-zero in 2050. A few suppliers in the four categories has been selected for close cooperation either due to large emissions or large spend. This will result in customized requirements by Lundbeck. We will proactively push the development of climate targets at our suppliers by using requirements in sourcing process, questionnaires, audit and meetings as well as specific reduction initiatives in the years to come. For the rest of the suppliers a more simple approach will be developed.

For new and excising chemical suppliers in high risk countries Lundbeck conduct on-site HSE audits. We aim to assist our GMO, API suppliers and chemical suppliers in target setting, risk asses impact and manage climate change actions, by putting focus on renewable energy consumption and sustainability when conducting HSE audits.

MEASURE OF SUCCES: Lundbeck have improved our carbon footprint model and CO2 inventory by assistance of Carbon Trust in 2020. This update provide a complete overview of our CO2 inventory and flag potential areas for improvement and action. Lundbeck are responsible and committed to push for all suppliers in selected categories to commit to climate targets and renewable energy sources by direct engagement. The impact of the climate related supplier engagement is to reduce our scope 3 emissions by 19% by 2034 (base year 2019) and ensuring Lundbeck source from a greater number of suppliers having a proactive climate approach and targets regarding climate change and low emission initiatives.

STATUS 2020:
Engagement target: 211 of the biggest upstream suppliers by emission and all downstream transportation suppliers are included in our target - 40 suppliers had climate targets in 2020.
New SBTi: 46% of the 24 suppliers in the 4 supplier categories (raw materials for production, packaging materials, CMO and CRO/Consultants) in the 2020 survey have adapted a climate target.

Comment

Lundbeck have several responsible drivers for the climate strategy and appointed category managers in the Procurement department in relation to the four categories. The drivers and category managers engage with our suppliers. Based on this dialogue we decide whether we want a soft wording (more of an intention) or decidedly contractual, binding requirements for the suppliers. The suppliers will be divided in the following groups:

Selected suppliers: A few key suppliers from each category having a high CO2 emission, a high spend. It can also be suppliers that perform very good in climate change reduction and enable Lundbeck to use these learnings in our approach with our other suppliers (e.g. cooperating about climate projects and either create large CO2 reductions or good case stories).

Other suppliers: This is the big group of existing suppliers where we don’t have specific cooperation's, but need to develop common requirements. The actual setup is not finished yet, but we expect to set up simple requirements like "using renewable electricity within 2 years" or the like. We have prepared a questionnaire for these suppliers asking for specific emission factors for the products and services purchased by Lundbeck in order to improve the data quality of our own carbon footprint.

Future suppliers: New suppliers where we don’t have a contract yet. Here we have the opportunity to set requirements from the start that will support our climate targets.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

80

% total procurement spend (direct and indirect)

4

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

17

Rationale for the coverage of your engagement

Lundbeck have build a strong relationship with selected suppliers (Logistic, Business travel, company cars). By doing so we (Procurement teams, responsible stakeholders or Corp. HSE) engage directly on climate related issues. Rationale for engagement: We have chosen these suppliers categories in scope 3, as we have a potential direct impact and are able to influence the emission by the suppliers. E.g. by making changes/initiatives in our own organization and by requesting the suppliers to act responsible. These categories cover 17% of our scope 3 emissions and 4% of our annual spend (2020). The suppliers cover 80% of all suppliers in the categories.

Logistic (upstream transportation and distribution for transportation of raw materials and finished products):

METHODE/CASE STUDY: In our written contract with the suppliers of outbound transport from Denmark, they are obliged to document CO2 emissions every 3 months. Suppliers submit this data directly to Lundbeck. We also focus on optimal and effective packing of the trucks, so all cargo room in the truck is being used the best way possible. We also work strongly to shift all logistics from air to sea or road if possible. These initiatives lower our own scope 3 emissions and raise the awareness on CO2 emission and climate change at the supplier. Lundbeck engage directly with 42% of our logistic suppliers. We extrapolate to 100%.

Business Travel:
METHODE/CASE STUDY: Annual reporting by suppliers and verification of data by PwC. Data cover travel and hotel nights. Air travel is by far the biggest emitter of the category. Lundbeck request travel information directly by our travel agents. Data cover Denmark, Sweden, Norway, China, Poland and USA. We receive emission data on short, medium and long haul as well as CO2 emission reporting practice. Lundbeck engage with 80% of our Business Travel suppliers. We extrapolate to 100%. Data also cover business meetings by own car and taxi, rail etc. .

Company cars:

METHODE/CASE STUDY:
Lundbeck collect primary data annually directly from our leasing companies on fuel consumption and CO2 emission. Data from Denmark, Italy, Spain, Portugal, USA and Canada. This makes up 43% of the car fleet in 2020. To make the total CO2 emission from our fleet we extrapolate to 100%. We have at total of 3000+ cars. Most company cars in USA are sales reps cars driving long distances.

Impact of engagement, including measures of success

Logistic suppliers (upstream transportation and distribution):
The total transportation of goods accounted for 7.0% of Lundbeck total scope 1+2+3 emissions in 2020.
STRATEGY: Lundbeck engage annually with all our outbound logistic suppliers from headquarters in Denmark. Lundbeck use these data to track how we can perform better, as criteria for selecting new suppliers and encourage the suppliers to adapt to more sustainable ways of transportation. E.g. EV and biofuels.
MEASURE OF SUCCESS: High influence by Lundbeck => High impact. If two suppliers offer the same service, but have different climate profile, this is a criteria by Procurement for choosing/evaluating potential new suppliers.

Business Travel:
Lundbeck decreased our business travel by 56% in 2020 compared to 2019, primarily due to COVID-19 restrictions resulting in less travel activity. The total Business Travel of employees accounted for 2% of Lundbeck total scope 1+2+3 emissions in 2020.
STRATEGY: Lundbeck encourage our employees to reduce travel and prefer online meetings as primary alternative. Only travel deemed necessary is encouraged. We also look into the possibility for SAF (Sustainable Aviation Fuel) and biofuel, but the market is not very mature.
MEASURE OF SUCCESS: Moderate influence by Lundbeck =>Moderate impact. Travel agent will report back upon our request. New Lundbeck travel policy where climate requirements are mandatory, for Procurement when choosing/evaluating potential new suppliers.

Company cars:
Lundbeck decreased CO2 emission by company cars by 4860 tones (26.2%) compared to 2019 - e.g. by nearly 1 million liters less fuel was used in USA, due to COVID-19.
The total emission from company cars accounted for 7.4% of Lundbeck total scope 1+2+3 emissions in 2020.
STRATEGY: Roadmap for 2034 reductions for Denmark and USA. Our procurement department focus on sustainability when signing up a leasing company. Lundbeck car policy offer already the possibility to use EV. Electric cars can be charged at our headquarter in Valby, Denmark. EV and low emission vehicles will be prioritized going forward.
MEASURE OF SUCCESS: High influence by Lundbeck => High impact. Adapt a sustainable car policy. If two suppliers offer the same service, but have different climate profile, this is a criteria by Procurement for choosing/evaluating potential new suppliers.

Comment

Lundbeck have responsible drivers for the strategy in the Procurement department (travel/company cars) and responsible drivers in the Logistic department. These responsible drivers have made a strategy for CO2 reduction, action plan and report back to Corp. HSE on progress on a quarterly basis.

C12.1d

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

The case study for 2020 is the update on our CO2 inventory by using a new footprint model provided by Carbon Trust. This new (scope 1, 2 and 3) inventory highlights new possibilities for reduction and help us reach our target.
Case study explained by use of STAR structure:

Situation: Incomplete and basic footprint model as not all scope 3 categories were part of the inventory. No consistent use of spend data in all possible categories. More primary data from suppliers was required.
Task: Updating of our carbon footprint model for complete inventory and better target setting. More primary data on travel and company cars has been provided by contacting selected suppliers. Update of all scope 3 categories.
Action: Migrate all data in new footprint tool. More data has been incorporated to cover all relevant scope 3 categories. This is done by use of specific emission factors and proxy emission factors, as well as specific supplier data (if available) and spend data
Result: Complete overview and better possibility to pinpoint where to engage in climate action and potential areas for improvement. Good tool for measuring our progress and to communicate with our suppliers and partners in the value chain.

Lundbeck have a open and on-going public communication on sustainability and our climate actions. In 2020 we signed a new Science Based Target. Committing us to cut 19% of our CO2 emissions in scope 3 by 2034.
This has been communicated by press releases, our annual CSR reporting, to selected partners in the value chain and on lundbeck.com.

Furthermore Lundbeck have joined the “Business Ambition for 1.5°C” initiative (in 2019) of leading companies who are aligning their business actions with the most ambitious aim of the Paris Agreement. This work and engagement was communicated by Lundbeck to investors and other stakeholders, as well as the public by use of national media press release and Twitter. Lundbeck invite investors and stakeholders to learn about our sustainability work including our strategy on climate described in our annual CSR report and our public CDP response. We are considering integrating the TCFD recommendations into our disclosure and target setting in the years to come. On our homepage we also engage investors and stakeholders in our climate progress and share our vision in our paper "Position on Climate Change". The paper is updated annually. We believe that investors and stakeholders will feel more secure investing in a company in control of our climate change risks and opportunities.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers

Trade associations

Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify National CO2 reduction target. The Danish government has established a climate partnership for Life Science and Biotech to identify possibilities and barriers for reaching the 70% CO2 reduction target in 2030	Support	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 a sector roadmap. The sector roadmap describes the contribution and climate ambition from each industry sector, as well as which framework 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. Lundbeck's Executive Vice President of Product Development & Supply (C-Suite Officer and member of EM) participated in this climate partnership. This included participation in:	Lundbeck support the messages defined in the partnership which includes: The partnership expects to reach, at least 70 % reduction in 2030 under current framework conditions. Further, as global companies, narrow national emission-goals are insufficient and global emission reduction ambitions are essential. The Partnership suggested several specific recommendations to reduce environmental impact and resource optimization: Standardization of materials, differentiation of taxes to encourage purchasing of recycled materials, revision of the tax scheme on surplus heating, streamlined classification of trash/hazardous waste, as well as a revised taxation scheme for electric company cars.

		- Kick-off meeting - 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 final report to the Government. The Sector roadmap was finalized in March 2020. Primo 2021 the sector roadmap was updated and again Lundbeck's Executive Vice President of Product Development & Supply (C-Suite Officer and member of EM) participated at meetings and contributed with updated input and commented on the plan.	

C12.3b

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

No

C12.3e

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

Lundbeck continuously engage with different kind of stakeholders:

Trade associations:

- EFPIA, European Federation of Pharmaceutical Industries Ass.: Lundbeck is member of a work group in the organization where all relevant environmental and climate related legislation is discussed. In 2016 we participated in preparation of a White Paper that commits the pharmaceutical industry to:
• Establish climate change policies/strategies based on materiality and impact for individual companies
• Develop actions that support science based CO2e reduction targets
• Contribute to increase energy efficiency and aim to use more energy from renewable sources
• Strive to harmonize GHG reporting based on recognized calculation methodologies and publicly disclose CO2e performance. In 2020 Lundbeck participated in the update of this white paper.
We participated in meetings where the level of ambition and the phrasing were discussed. The biggest updates concern clarification of the sectors support to the EU Green Deal and the importance of also addressing scope 3 in our climate actions.
In the same work group, we also prepared a response to EU's Public Consultation on the Carbon Border Adjustment.

Other:
UN Global Compact: UN Global Compact have 10 principles where 3 are related to environment which include climate change:
• Businesses should support a precautionary approach to environmental challenges;
• Undertake initiatives to promote greater environmental responsibility;
• Encourage the development and diffusion of environmentally friendly technologies.
Lundbeck have signed the 10 principles in UN Global Compact and we annually pay membership to the UN Global Compact Foundation. Furthermore, we participate in the UN Global Compact Nordic Network, which is a forum for exchange of knowledge and best practice within the 10 principles, including energy conservation and climate change strategies. As part of the UN Global Compact commitment, we publicly report our CSR performance, challenges and targets.

In 2019 we signed the "Business Ambition for 1.5°C" Commitment Letter and hereby joined the global movement of leading companies aligning their business with the most ambitious aim of the Paris Agreement, to limit global temperature rise to 1.5°C above pre-industrial levels and reach Net Zero by 2050 for the best chance of avoiding the worst impacts of climate change.

In 2020 we signed a statement where Lundbeck together with over 150 global corporations, The Science Based Targets initiative, the UN Global Compact, and the We Mean Business Coalition urging governments around the world to align their COVID-19 economic aid and recovery efforts with ambitious climate action.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

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 Twitter 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.

C12.4

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

Publication

In mainstream reports

Status

Complete

Attach the document

Page/Section reference

page 28 and 29

Content elements

Strategy
Emission targets

Comment

Public on www.lundbeck.com

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

Page/Section reference

p. 11: Performance, targets, strategy
p. 12: Carbon footprint
p. 19: Targets
p. 20: Energy and emission figures
p. 26: Targets
p. 27: TCFD reference index incl. risk & governance

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics
Other, please specify
For the first time we have prepared a TCFD reference index

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

Page/Section reference

p. 1.

Content elements

Other, please specify

Press release about our CDP ranking 2020

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

Page/Section reference

p. 1

Content elements

Strategy

Emission targets

Comment

Press release about our new Science Based Target.

Publication

In voluntary communications

Status

Complete

Attach the document

Page/Section reference

p. 1

Content elements

Other, please specify

Twitter announcement about our support to "Our only Future" Campaign.

Comment

A statement from companies in the Science Based Targets initiative and it's "Business Ambition for 1.5°C" Campaign. As countries work on economic aid and recovery packages in response to COVID-19, and as they prepare to submit enhanced national climate plans under the Paris Agreement, we are calling on governments to reimagine a better future grounded in bold climate action"

C15. 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.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Executive Vice President of Product Development & Supply. Member of Executive management group and appointed to attend Board meetings.	Board/Executive board

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 5,800 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 17.672 billion in 2020.
Our sustainability actions are integrated into Lundbeck's strategy that has significant impact on six of the 17 Goals. In addition, we are seeking partnerships with others to enable change and maximize impact across our sustainability efforts.
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. We will use our influence and act to promote Goals 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. In 2018 we renewed our long term target for the forth time: We will reduce our scope 1 and 2 CO2 emission by 30% in 2026 and by 70% in 2035 compared to 2016. 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 Sustainable Development Goal 13, Climate Action.

SC0.1

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

	Annual Revenue
Row 1	17,672,000,000

SC0.2

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

Yes

SC0.2a

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

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	dk	0010287234

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
481

Uncertainty (±%)
10

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.

Verified
Yes

Allocation method
Allocation based on the number of units purchased

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 product units with the intensity figure per production unit. Our intensity figure is a combined scope 1 and 2 figure based on our total scope 1 and 2 emission from all our production sites. Scope 1 is calculated by multiplying the proportion of scope 1 constituted by the total scope 1 and 2 emission.

Requesting member
Johnson & Johnson

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail

Emissions in metric tonnes of CO2e
650

Uncertainty (±%)
10

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

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 product units with the intensity figure per production unit. Our intensity figure is a combined scope 1 and 2 figure based on our total scope 1 and 2 emission from all our production sites. Scope 2 is calculated by multiplying the proportion of scope 2 constituted by the total scope 1 and 2 emission.

Requesting member
Johnson & Johnson

Scope of emissions
Scope 3

Allocation level
Company wide

Allocation level detail

Emissions in metric tonnes of CO2e

13,846

Uncertainty (±%)

10

Major sources of emissions

The scope 3 emission is a mix of all our scope 3 emissions since all activities in scope 3 are directly or indirectly included in the process developing, producing or selling our products.

Verified

No

Allocation method

Allocation based on the number of units purchased

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

The emission is calculated by multiplying our total scope 3 emission with the percentage the product amount for Johnson and Johnson accounts for. Lundbeck's scope 3 GHG emissions are primarily based on economic spend data from Lundbeck and primary data directly from the suppliers if available.

Requesting member

CVS Health

Scope of emissions

Scope 3

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO2e

3,241

Uncertainty (±%)

10

Major sources of emissions

The emission is located in Lundbecks scope 3, but accumulated as our suppliers scope 1, 2 and 3 together. The major sources of emission in scope 1 is probably methane gas, in scope 2 electricity and scope 3 is a mix of all the scope 3 emissions we have in our scope 3.

Verified

No

Allocation method

Allocation based on the number of units purchased

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: 153 ton, Scope 2: 152 ton and Scope 3: 3241 ton. Total of 3506 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 elated 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 2020
Sustainability (lundbeck.com)

In our CDP investor response 2020 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 the different product units. Installation of energy meters on relevant production equipment could be one step on the way to make more precise calculation. Another challenge is that we do not have a method for calculating our research and development activities on product level. Research and development and especially legally required clinical studies and analyses emit huge amounts of CO2. We do however 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. Many of the scope 3 emissions are based on proxy data, general emission factors and spend data making the uncertainty of the numbers reported higher.

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 Scopw 1,2 and 3 inventory combined in a new database. This has updated the categories in scope 3 considerably. 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.

Target of Engagement with suppliers:
The target is an engagement target and not a part of our absolute emission targets.
Engage with 2/3 of the biggest upstream suppliers by emission to motivate them to develop ambitious climate targets by 2026. Suppliers in scope are: CRO's, IT, consultants, raw- and packaging material for production and company cars.
Engage with all downstream transportation suppliers to motivate them to develop ambitious climate targets by 2026.
This target is our first scope 3 target and include all our significant suppliers by emission (up- and downstream). At the moment 211 suppliers are included in our target and 40+ suppliers have climate targets in 2020.

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

1-3 years

Estimated lifetime CO2e savings

100

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.

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

1-3 years

Estimated lifetime CO2e savings

50

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.

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.

0.95

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

75.9

±% change from previous figure supplied

751

Date of previous figure supplied

May 19, 2020

Explanation of change

Total emissions in kg CO2e per unit in 2019 was 10.10. In 2020 it is 75.9. This is an increase of 751% compared to 2019. Due to our new CO2 inventory model, the numbers differ (especially in scope 3) though we see a 13.5% reduction in emissions (scope 1 and 2) for 2019 to 2020.

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

51.6

±% change from previous figure supplied

633

Date of previous figure supplied

May 19, 2020

Explanation of change

Total emissions in kg CO2e per unit in 2019 was 8.14. In 2020 it is 51.54. This is an increase of 633% compared to 2019. Due to our new CO2 inventory model, the numbers differ (especially in scope 3) though we see a 13.5% reduction in emissions (scope 1 and 2) for 2019 to 2020.

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

75.9

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 om spend data or primary data from our suppliers if available.
Scope 1 and 2 is under our control but many of our scope 3 emissions are not. 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

61.5

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 om spend 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	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 out energy reducing activities can be seen in section C.4.3b Of energy reducing examples can be mentioned insulation, optimization, adjustment to energy on demand and renewal of old machines/equipment like pumps, ventilation, cooling ect. The total reduction in CO2 emission from Lundbeck in 2020 compared to 2019 was 13.5% (2.300 tons). The part of the CO2 reduction for J&J and CVS corresponds to 22 tonnes (0.95 % of Lundbeck total Scope 1,2,3 reduction).	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 am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?

I am submitting my response	Investors Customers	Public	Yes, I will submit the Supply Chain questions now

Please confirm below

I have read and accept the applicable Terms