Welcome to your CDP Climate Change Questionnaire 2020

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 5,800 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 billion in 2019.

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.

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, 2019	December 31, 2019	No

C0.3

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

Denmark
France
Italy

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 5 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. Lundbecks Audit Committee has the highest responsibility for reporting and advising the Board about business risks including climate risks and report on regular basis to the board. The chairman of the board, two other board members and our Executive Vice President of Product Development & Supply (C-suite officer) are members of this committee. 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 Council. This Council has the highest level of responsibility for climate change and decide 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, EM and the Audit committee. An example on a decision that was presented for the board is our decision about joining 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. It was signed by our CEO and presented for the board.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The CEO has the highest responsibility of the sustainability strategy and present major decisions to the board when relevant. In 2019 we updated our sustainability strategy following a careful assessment of our current initiatives against external reference points including the Sustainable Development Goals. As a result, we are taking new initiatives to pursue our targets for 2020 and long-term aspirations for 2030. 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. This is an example on major decisions that are presented for the board. Additionally, we included status on our climate performance in our quarterly financial releases by the end of 2019. These 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 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 committee, please specify Lundbecks Audit Committee has the highest responsibility for reporting and advising the Board about business risks. They get input about climate risks from the COO, the Risk Committee and the annual Business Impact Analysis Report.	Assessing climate-related risks and opportunities	Annually
Other, please specify The Senior Vice President for Supply Chain & Facility Management is approver of the Business Impact Analysis Report and has the overall responsible 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 including 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. The reason for this appointment is, that he:
- Is member of the Executive management.
- Participate at board meetings
- Is member of the Audit Committee
- Has the overall responsibility for all production and facility management and the overall responsibility for Lundbecks energy costs.
- Is appointed by the CEO to be chairman for Lundbecks 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:
o Define and evaluate corporate HSE policies, strategies, guidelines and corporate activities and targets concerning HSE aspects including
o climate change and climate targets.
o Evaluate Lundbecks HSE performance quarterly and annually including status on our climate targets.
o Communicate corporate decisions to managers and employees at all sites.
Climate change issues are considered to be one of the significant environmental issues in Lundbeck and are therefore managed and controlled by the HSE Council. This means that Lundbecks Climate Strategy and our long-term CO2 emission target is decided and approved by the HSE Council. The HSE Council have quarterly meetings.
- 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" of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement, that is signed by our CEO. The quarterly Corporate release is presented and evaluated at the Board meetings.

The Board of Directors has set up an **Audit Committee**, which has an advisory role relative to the Board of Directors, including matters such as internal controls in the financial reporting procedures, special financial and accounting issues, evaluation of financial reporting and other financial information and risk management. Lundbecks Audit Committee is responsible for gathering and presenting the annual results from the risk management system which includes the identified climate related risks to the Board. At least once a year, the Audit Committee assesses whether the internal controls related to the financial reporting process are effective in relation to the risks identified.

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 Lundbecks 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 and 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 eventually 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 participates 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
Board/Executive board	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 our emission reduction targets (scope 1 and 2) and the overall project concerning development of a new Science Based Target included in his bonus goals. This means that evaluation of our fulfillment of the climate related short term and long-term targets is influencing the size of the bonus for our Executive Vice President of Product Development & Supply. The short term target (3% CO2 reduction in 2019 compared to 2018) is created partly by breaking down the corporate long term target about GHG emissions and partly by looking into energy forecasts.
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 2019 was to reduce our CO2 emissions (scope 1 and 2) with 3% compared to 2018. In 2020 an emission reduction project including 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.
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	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 an initiative 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 related planning and identification of risks and opportunities. For the climate targets our medium horizon runs from 2 - 10 years which is reflected in our medium-term target running from 2016 - 2026.
Long-term	10	20	Our long-term horizon for climate planning and identification of risks and opportunities runs from 10 - 20 years. This is reflected in our long-term climate target running from 2016 - 2035.

C2.1b

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

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 assett level are assessed. By combining the individual risks probability and financial/strategic impact the final risk is determined as

low, medium or high. Both low, medium and high risk levels can be considered as substantive for the company. Depending on the probability, risks from EBIT value 50 MDKK and up can be categorized from low to high. E.g. a flooding at one of our Japanese partners is considered to have substantive impact on our business and is ranked medium in our risk system. The financial impact is estimated to 250 MDKK and the site is situated close to the see in a medium-high risk area for floodings according to Aquaduct Water risk atlas and therefore likely to happen.
Risks with an EBIT value from 500 MDKK are always as minimum considered medium risks even though the situation is unlikely to happen. E.g. a flooding at our Finished Goods Production at our Headquarter site in Denmark is considered to have substantive impact on our business and is ranked medium - high in our risk system. The financial impact is estimated to 600 MDKK and the site is situated in a low-medium risk area according to Aquaduct Water risk atlas. It is therefore unlikely to happen, but even though we have experienced flooding due to heavy rain.

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. 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:
A very important input in our risk management system is our Business Impact Analysis (BIA) Report that includes 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 business interruption impact and mitigation of risks securing a resilient supply chain. Based on the identified risks our Business insurance premium is decided. Two of the most substantive identified risks in 2019 are flooding due to severe weather events at our pharmaceutical site in DK and coastal or riverine flooding at our second largest supplier in Japan which is situated close to the see in a medium-high risk area for flooding. Mitigating actions are continuously implemented and improved e.g. we have established catch basins at our DK site and prepared possibilities for transferring production between our sites. To mitigate identified risks at our suppliers we have a supplier evaluation process that covers all our first-tier suppliers globally and includes questionnaires and evaluation of the responses. 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. E.g. has our supplier in Japan decided to validate a second source production site outside Japan. The main results from the BIA report is presented for the Executive management and included in our risk register.

Two years ago, we decided a scope 3 target increasing our collaboration with suppliers on setting up climate goals and we expanded our standard questionnaires to our suppliers with questions concerning their climate policy and target. We expect to increase our engagement with suppliers on climate action contributing to mitigate both physical and transitional risks in the supply chain.

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 monthly and social/reputational trends are evaluated at least twice 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 carbon taxes which is mitigated by implementation of energy reducing activities. Since 2006 we have reduced our energy consumption by 35% and our CO2 emissions by 68%. In 2019 we identified a new risk in our downstream value chain related to requirements for fixed low storage temperature when distributing by flights. The increased temperature requirements mean that we will have to use active cooling containers instead of thermal blankets increasing the energy consumption and the costs.

OPPORTUNITIES are identified and managed by the organizations decentralized business units as they have the most extensive knowledge. Evaluation of opportunities and decisions are taken in the units. Some opportunities are implemented immediately 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. E.g. in 2019 it was decided to increase our climate ambition by joining the “Business Ambition for 1.5°C” of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement. We believe this will improve our ESG rating and have a positive financial impact on financing/funding for Lundbeck and influence our ability to attract employees.

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 monthly 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 considered low. Another example is our implementation of the directive on energy efficiency (Directive 2012/27/EU) on all sites that need to comply with the directive. 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 air treatment system 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. 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 monthly 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 favor recycled and recyclable materials to support a more circular economy. The regulation is still to be determined in more detail, both the scope and the national implementation before the affect on our operational costs can be estimated. 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 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 favor trucks with cooling systems on several product transports.
Technology	Not relevant, explanation provided	Lundbeck do not develop new 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. All technologies that can contribute to reduction of our energy consumption present an opportunity for the company to reduce our risk related to increasing energy prices and taxes. 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 a new air treatment system, that are expected to be installed during 2020 at our chemical site in Denmark. This initiative will reduce a huge increase in our fuel consumption. 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 the Paris Agreement and limiting climate change to the 2 degree scenario. 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. This commitment clear expresses our support to Sustainable Development Goal 13, Climate Action. Therefore we do not believe climate-related litigation claims are a risk to Lundbeck.

Market	Not relevant, explanation provided	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. We do not assume that these disease areaes are impacted by climate changes during the next 10 years. Neither do we 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 Lundbecks 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 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. In addition, it can influence our ability to attract the right employees. We have also considered if there could be a reputational risk related to customers and stakeholders belief and thinking of Lundbecks 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. Latest 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 will prepare a new SBTi (1,5 degree) in 2020. We have also decided to prepare our first TCFD report in 2021. 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 dual sourcing and increase of back up production possibilities. An example on a risk is flooding at one of our Japanese partners situated in a high-medium risk area for floodings. This risk is considered to have substantial impact on our business and is ranked medium in our risk system. To minimize risk our partner has decided to validate a second source production site outside Japan. Another example is the risk for floodings 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 considering to establish green roofs when we make big renovations and new facilities. At the moment we are planning to establish app. 2,850 m2 green roofs 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 the site. A worst case scenario would be a big damage in our Finished goods production due to another 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 suppliers sites, we use the Aqueduct tool. Some of our suppliers are situated in India and China and are in risk of e.g. drought and rising temperatures, but many of our suppliers and partners and our own sites can be affected by severe weather events caused by e.g. increased temperature. The business risk related to chronic physical risks would be missing or delayed deliveries from suppliers, partners and own sites with substantial business risk. Most likely due to flooding or heavy storm and similar to the risks related to acute physical risks.

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. E.g. we do expect that new European and international agreements like the Paris Agreement will result in new regulation like renewed cap and trade schemes, increased carbon taxes, increased energy prices and requirements about the use of renewable energy and the like. Also regulatory incentives towards favoring 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 night time where there is excess of wind energy. This means that the price for energy used in daytime will increase. Lundbeck cannot move our electricity consumption to night time. Therefore this initiative will mean increased operational costs because the electricity will be more expensive during daytime where we produce.
Due to the Paris agreement and the political agenda in EU and in Denmark and the fact that Lundbeck want to be a responsible company, we are increasing our sourcing of renewable electricity, this also increases our energy costs. In 2019 our energy costs increased with 78,000 DKK due to sourcing of renewable electricity.
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 Lundbecks 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, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

58,000,000

Potential financial impact figure – maximum (currency)

58,450,000

Explanation of financial impact figure

Today our total energy costs only constitute about 0.3% of our revenue (app. 58 MDKK compared to our revenue at 17,036 MDKK). In Denmark a part of the energy cost is a carbon tax currently on app. 3 MDKK a year. We expect that energy prices and taxes will rise in the future in most parts of the world. Our increased sourcing of renewable energy has also increased energy costs by 78000 DKK in 2019. Even though our energy costs are increasing, risks from these changes are considered low. If our future energy costs incl carbon tax were doubled to around 116 MDKK (an increase on 58 MDKK), the energy cost will still be low compared to our revenue. We are determined to increase our sourcing of renewable electricity. If we decide to purchase certificates for all our electricity consumption the cost with current prices would be app. 250.000 DKK.

Costs related to other legislations like the directive on energy efficiency are also 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 extra costs for implementing and comply with this directive is only app. 200,000 DKK/year.

In a worst case scenario the total extra cost is estimated to range from a doubling of the energy cost (58 MDKK extra) up to a cost that also includes cost for renewable electricity and cost for compliance with the energy directive (app. 450.000 DKK).

Cost of response to risk

4,400,000

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. Lundbecks sites have procedures to identify changes in HSE legislation, incl. legislation related to climate issues. When changes is identified, Lundbeck consider what consequences the regulation may have, and following 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 CO2 strategy and our focus on year on year energy optimizations. Our strategy has both long-term and annual targets. Due to this focus we have reduced our annual electricity costs with app. 25 MDKK since 2006. We also seek to reduce the financial impact of changing energy prices by making contracts with our energy suppliers with fixed energy prices for e.g. 3 years. Costs associated with our CO2 strategy and energy savings were in 2019 app. 2.2 MDKK in energy reducing activities and app 1 MDKK on internal resources.

In 2019 we increased our level of ambition on climate change and decided to establish a Power Purchase Agreement (PPA) on renewable electricity for our two Danish sites in 2020. We expect a PPA will make us more resilient towards changes in carbon taxes and energy costs, because the agreement will run for several years (probably 10 years) and because it is supporting the transition to renewable energy. We do not

expect an increase in the cost per kWh when we enter the PPA, but we will have internal cost to resources for preparing the PPA. This will be included in next year reporting.

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 and 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".

Cost of response to risk can therefore be summed of the cost for: Energy reducing activities/projects: 3.2 MDKK, Internal resources for CO2 strategy: 1 MDKK and Energy reviews: 200,000 DKK. In total 4.4 MDKK.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

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

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Lundbecks own sites are located in low risk areas (Denmark) and medium risk locations in Italy and France. Even though the risk is small a variety of extreme weather situations that damage buildings in more or less severe degree can occur at Lundbecks 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 and 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 for damages that in worst case also can can affect our production capacity due to extreme weather situations.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

8,000,000

Potential financial impact figure – maximum (currency)

600,000,000

Explanation of financial impact figure

To estimate a potential financial impact figure range we can use the cost of repairs we experienced in 2012 on app. 8 MDKK and a worst case scenario including a flooding in our Finished Goods Production at our headquarter site in Denmark. This scenario is identified and analysed in

our Business Impact Analysis Report and included in our risk register. A property loss related to such a situation is estimated to app. 600,000 DKK.

Cost of response to risk

10,727,000

Description of response and explanation of cost calculation

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 DK, 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 and secured fragile installations like power stations. In 2019 we installed a fire hydrant to minimize damages from a fire e.g. due to lightning and we are planing to establish app. 2,850 m2 of green roofs which will be 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

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 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.

Cost of response to risk can therefore be summed of the cost for: Preventive activities from 2013 to 2016: app. 5 MDKK, Installation of a fire hydrant in 2019: app. 0.1 MDKK, Cost for Green roofs compared to roofing felt 627,000 DKK and our Property and Business interruption insurance costs 5 MDKK annually. In all: 10,727,000 DKK.

Comment

Since 2017 new buildings and equipment are secured when they are established or renovated and therefore integrated in the total cost for the building project and not considered extra cost.

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

Decreased revenues due to reduced production capacity

Company-specific description

Acute physical risks like exposure to extreme weather events can affect Lundbecks partners and suppliers. Most of our suppliers and partners are situated in Europe and USA at locations where extreme weather situations rarely have a character that affect product reliability, but we also have suppliers and partners located in Japan, India and China, primarily at locations that are considered to have a high or medium risk for acute physical risks like flooding, extreme weather events and/or chronic physical risks like drought and temperature rise. So far we have not experienced damaging weather events at our suppliers and partners, but we do know from our own sites, that extreme weather events do happen more often, even at locations with low or medium risk. E.g. we have experienced damaging weather events twice (storm and extreme rain) at our headquarter site in Denmark (low risk area) some years ago. Also at our previous site in USA located in a medium risk area we have experienced a damaging storm 6 years ago. Due to this, we must expect that extreme weather situations can affect the sites of our suppliers and partners and the reliability of their supply.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

250,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Until now Lundbeck have not experienced problems with suppliers and partners reliability due to extreme weather situations. But due to the location in medium – high risk area of some of our suppliers we cannot exclude, that extreme weather situations can affect the reliability of our supply chain.

The most likely scenario to happen is a flooding at one of our Japanese partners that are located close to the see in a medium – high risk area according to the Aquaduct Water Risk Atlas. Based on our Business Impact Analysis report a flooding at this Japanese site is estimated to have a financial impact at app. 250 MDKK due to business interruptions.

Cost of response to risk

11,800,000

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 and annual risk assessment workshops covering all production areas, warehouses, contract manufacturers, suppliers and supporting functions. It also includes that all our partners prepare factory risk assessments that describes factory risks, including climate risks and how they are mitigated. The primary focus of this process is to get an overview of business interruption impact and mitigation of risks securing a resilient supply chain. The result is gathered in a Business Impact Analysis report. This report is also used to define the necessary coverage of our Property and Business Interruption insurance.

We also ensure suppliers and partners adherence to our company's ethical standards by conducting multiple audits. This include evaluation of

their exposure to physical risks. Audit activities are planned in accordance with the current risk picture. All suppliers must sign a mutual commitment in our contracts to comply with environmental law and to have a precautionary approach to environmental challenges like climate change. In 2019 we conducted 182 audits at suppliers and partners.
Other mitigating activities:
- Monitoring of supply to help us overcome any breakdown in production.
- Dual sourcing for critical raw materials so we can switch to another supplier if needed.
- Production and packaging facilities at our 4 independent sites which enhance our production flexibility. E.g. our chemical sites can manufacture the active ingredients we source at our suppliers.
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. To indicate a size of cost of response we can use the cost for:
Preparation of Business Impact Analysis report: 1 MDKK
Our Property and Business Interruption insurance on 5 MDKK
The cost of audits at suppliers and partners on app 5.8 MDKK in 2019.
In all: 11.8 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 Documentation 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 in front of air, but in situations where volumes are very low or there is a time constrain we have to transport by air.

The increased temperature requirements means that we will have to use active cooling containers instead of thermal blankets on some of our distribution routes where we use flights. Many of our old products are quit stable towards temperature fluctuations, but some of our new products are more sensible increasing the need for active cooling more. 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, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

10,000,000

Potential financial impact figure – maximum (currency)

15,000,000

Explanation of financial impact figure

To estimate the impact of the new GDP requirements, all distribution routes are being analysed and the extended need for active cooling during transportation is being mapped. The work is ongoing but so far the direct costs are estimated to increase our distribution costs with 10 - 15 MDKK a year, a significant increase to the previous cost on app. 30 MDKK.

Cost of response to risk

1,300,000

Description of response and explanation of cost calculation

All regulations are also followed continuously in the relevant local business units and the business risk evaluated. To comply with the increased requirements for temperature cooling we have bought new more advanced temperature loggers and implemented a new electronic system to handle the information from the temperature loggers. This information is used for analyzing which distribution routes we are required to have cooling containers and which 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.
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 implementing the new electronic system, analyzing data and implementing active cooling containers where needed (two man-years 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

Returns on investment in low-emission technology

Company-specific description

Lundbeck is exposed to fossil fuel price increases and increases in the cost of carbon. Our two Danish sites and is exposed to carbon taxes.
The current situation with low energy prices and the emerging options for Power Purchase Agreements (PPA's) creates a good opportunity for Lundbeck to enter a long-term PPA agreement including additional renewable electricity to the grid and a low fixed energy price.
Entering a PPA is also a strong and important contribution to Lundbecks climate targets and to our commitment to “Business Ambition for 1.5°C” of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement.
In 2019 we began to explore the opportunities and our intention is to enter a PPA in 2020 for our two Danish sites and following establish agreements for our sites in Italy and France during the next few years. 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.
In addition we do continue our efforts with energy efficiency and energy reductions which also make our business more resilient to increasing energy prices and carbon taxes. Since 2006 we have reduced energy consumption by 35% and reduced the annual energy cost with app. 27 MDKK.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

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)

58,000,000

Potential financial impact figure – maximum (currency)

61,000,000

Explanation of financial impact figure

We believe that by entering a Power Purchase Agreement (PPA) based on additional renewable energy with a fixed energy price we can reduce the impact from increased energy prices and carbon taxes. To estimate a financial figure we can use a doubling of our energy cost from 58 MDKK to 116 MDKK. This means that by entering a PPA we have the opportunity to avoid an increase on 58 MDKK in energy costs.
Since 2006 we have reduced our energy consumption with 35% and reduced the annual energy costs with app 27 MDKK making us more resilient towards increased energy costs. We will continue our focus on energy reduction and energy efficiency and through this avoid increases in energy costs due to increased energy consumption. On the short term an increase in energy consumption is estimated to app 5% equivalent to 3 MDKK. So by increasing energy efficiency we have the opportunity to avoid an increase in energy cost at app 3 MDKK.

Cost to realize opportunity

4,200,000

Strategy to realize opportunity and explanation of cost calculation

The main driver for the decision about entering a Power Purchase Agreement (PPA) with additional renewable energy 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 aligning their business actions with the most ambitious aim of the Paris Agreement. By entering PPA's with additional renewable energy we are able to reduce our CO2 emission in scope 2 significantly and to contribute to the general transition towards renewable energy. The cost for developing our Climate strategy is constituted by the use of internal resources in the Corporate Health Safety and Environmental dep., The Compliance&Sustainability dep and relevant line managers. Estimated to 1 MDKK in 2019.

Another strong element in our climate strategy is our continuous focus on energy efficiency and energy reductions which also makes us resilient towards increased carbon taxes and energy prices. Costs associated with our energy saving activities and projects were in 2019 app. 3.2 MDKK.

The time for entering a PPA is favorable since the prices are low compared to our current electricity agreement and due to a PPA runs for several years, it will be possible to obtain a low fixed electricity price, making us more resilient to increasing energy prices and carbon taxes. This means that the prize for realizing a PPA is mainly constituted by the price for internal resources (estimated to app 500,000 DKK) and consultancy fees (not yet known) used for finalizing a good agreement. As the main part of this work is lying in 2020, it will be included in the CDP reporting next year.

The cost for realizing this opportunity can be summed as: Internal resources for the Climate strategy: 1 MDKK and cost associated with energy saving activities: 3.2 MDKK. In all: 4.2 MDKK.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resilience

Primary climate-related opportunity driver

Other, please specify

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

Primary potential financial impact

Increased access to capital

Company-specific description

There is an opportunity and potential for good Environmental, Social and Corporate Governance (ESG) 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.

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 and oil companies).
In 2019 Lundbeck did consider a green loan, but due to extended lead times decided against it for the current funding.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4,100,200

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

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
* 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 fairly 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 being a bad performer on ESG compared to the benefit of being a fairly good performer.

Due to Lundbeck focus on ESG we have not included any potential from going from a bad performer to a better performer.

Cost to realize opportunity

5,200,000

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 Lundbecks 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 2019 we responded to 7 benchmarks, one of them CDP and in 2020 we expect to respond to a few more.
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 prioritizing Climate Action as one of two top priorities in our new Sustainability Strategy that was finally consolidated in January 2020.
The current costs for this strategy is estimated to:
- Responding to benchmarks: Internal resources: 1 MDKK
- Development of the climate ambition and targets: 1 MDKK
- Cost for energy projects to reach our climate targets: 3.2 MDKK
In all: 5.2 MDKK.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of climate adaptation, resilience and insurance risk solutions

Primary potential financial impact

Other, please specify

Increased reliability of supply chain and ability to operate under various conditions

Company-specific description

Securing a strong and resilient supply chain and own production gives Lundbeck the opportunity to maintain satisfied customers and future sales. As a company that produces medicine the ability to maintain a steady production is very important because it is essential to secure that patients suffering from brain diseases can trust on our ability to deliver medicines as needed.
Lundbecks own sites, suppliers and partners can be affected by extreme weather situations like storms and flooding and we have experienced weather events some years ago affecting our business in minor degree. E.g. we experienced heavy rain and storm on our headquarter site in Denmark causing damage to several buildings and in our supply chain one of our important partners are situated in Japan in a medium – high risk area for flooding. Adaptation of both our own, partners and suppliers sites towards climate changes is of great importance to maintain a robust and resilient supply chain and production. Having a strong process for adaptation and mitigating actions gives Lundbeck the opportunity to be able to deliver medicine to all patients also when climate related events appear.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

250,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

To estimate a financial impact range, we have looked at the opportunity for avoiding business interruptions and lost sales. In our Business Impact Analysis the most likely climate related scenario to happen is flooding at our Japanese partner resulting in business interruption with a financial impact on app. 250 MDKK. So by having mitigating actions, like in this case where our partner is building a new site in the US as a back up site for the Japanese site, we have the opportunity to believe in our sales forecast and secure that patients can have trust in our ability to deliver medicines as needed.

Cost to realize opportunity

11,800,000

Strategy to realize opportunity and explanation of cost calculation

The strategy to seize the opportunity for maintaining the patients trust in our ability to deliver medicines avoid property and business interruptions caused by extreme weather is to have a strong Risk Management process and mitigating actions in place. One of the important elements in our risk management system is the annual Business Impact Analysis focusing on business interruptions at our own sites and in our supply chain including factory risk assessments at our partners. The analysis forms the basis of the development of our mitigating actions. We have several mitigating actions in place e.g.:
- Securing our buildings against heavy rainfall, storms etc. E.g. our cactch bassins in a park area and under a large office building at our headquarter.
- Supplier evaluations that ensure suppliers and partners adherence to our company's ethical standards (Code of Conduct).
- Monitoring of supply and maintaining an inventory to overcome breakdown in production.
- Second sources for critical raw materials.
- Production and packaging facilities at our four independent sites to enhance production flexibility. And the ability to manufacture the active ingredients we source at our own sites.

It is difficult to separate activities that are solely carried out due to climate related opportunities, but to indicate a size of the cost we can use our resources for preparing the Business Impact Analysis (1 MDKK), our activities to secure our sites (5 MDKK/3 years) and our supplier evaluation audits in 2019 (5.8 MDKK). In all: 11.8 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, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform its strategy?

Yes, qualitative

C3.1b

(C3.1b) 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 chose this scenario as it comply with the TCFD recommendations about including a 2°C scenario and because it is possible to examine both physical and transitional impacts. We use these scenarios to help us guide our overall CO2 strategy and highlight future financial and non-financial impacts. The Scenario analysis covers our value chain from research to sales activities including considerations related to changing customer needs due to climate changes. Three time horizons have been considered 2021, 2026 and 2035 covering time horizons for our climate targets and Lundbecks financial planning horizon on 10 years. The most important inputs are TCFD and CDP Guidance, the public scenarios, DK and EU targets and our identified risks and opportunities. For the physical scenarios, we have also used the forward looking scenarios from WRI's Aquaduct atlas. 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 that has influenced our business strategy is the expected increase in carbon taxes and energy costs and the increasing importance of being ranked high in ESG benchmarks in order to improve our possibilities for advantageous financing/funding and to attract the right employees. We have sites in Denmark where we pay carbon taxes and we do expect an increase in other countries in the use of carbon

	taxation. In our CO2 strategy we have for many years had a strong focus on energy optimizations to keep the financial risks from increased energy prices and carbon taxes low. In 2019 we decided to enter a Power Purchase Agreement (PPA) on renewable electricity for our two Danish sites. A PPA will make us more resilient towards changes in carbon taxes and energy costs. Entering a PPA is supporting the transition to renewable energy and due to the current low energy prices the timing is good. In 2019 we increased our ambitions by signing the “Business Ambition for 1.5°C” pledge and decided to prepare our first TCFD report in 2021. This will strengthen our possibility for staying among the leading companies and strengthen and improve our ratings in ESG benchmarks. We are seeing 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. In 2019 Lundbeck did consider a green loan, but due to extended lead times decided against it for the current funding. For some years we have also known that good ESG rating is affecting 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 and partners about mitigating actions for transitional and physical climate changes. In 2018 we decided to include supplier engagement in our climate target and in 2020 we will submit a new Science based target where our supply chain focus will increase significantly. • The future increase in electrical vehicles (EV). In Denmark where our headquarter and a chemical site is located it will only be possible to buy EV's by 2030. We have establish parking lots for EVs and in 2019 EVs were included in the company car policy. In 2021 we will prepare our first TCFD report where the scenario analysis will be used.
RCP 8.5	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 8.5 focuses on physical climate implications and does not include strict climate policies. It approximates a “business as usual” scenario including a 5-6 degree rise in temperature, which could lead to sea level rise, changing weather patterns and stronger and more frequent weather events. The RCP 8.5 is chosen to explore a worst case scenario for physical climate changes. We use these scenarios to help us guide our overall CO2 strategy and highlight likely financial and non-financial impacts in the future. In 2021 we will prepare our first TCFD report where the scenario analysis will be used. Our scenario analysis covers our value chain from research to sales activities and includes considerations related to changing needs for our pharmaceuticals at our customers due to climate changes. By the use of WRI Aqueduct tool three time horizons have been considered 2020, 2030 and 2040 covering our time horizons for our

	climate targets 2021/2026 and 2035. These time horizons also covers Lundbecks financial planning horizon on 10 years. The most important inputs are the TCFD and CDP Guidance documents, the public scenarios and our already identified risks and opportunities. For the physical scenarios, we have also used the forward looking scenarios from WRI's Aquaduct atlas. 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 that has influenced our business strategy is the expected risk for acute physical risks like exposure to extreme weather events like occasional floodings and storms at our partners and suppliers and physical risks at our own sites due to extreme weather events. One of our key partners is located near the coast in Japan and already today the location is considered to have a medium to high risk for riverine and coastal floodings and will remain to have this risk in 2040. 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 e.g. has our Japanese partner decided to validate a second source production outside Japan making the supply more resilient to increased sales and breakdown. Lundbecks 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 a Business as usual scenario we expect that the frequency of extreme weather events will increase and due to this we are continuously securing our own sites towards floodings 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 including design of new facilities. Example are the establishment of our two catch basin on our Headquarter site and in 2019 we started planning of 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 4 independent Production and packaging facilities that can take over for each other. We are considering to include input from the scenario analysis and the WRI Aquaduct tool in our risk management workshops and integrating the results in our TCFD report in 2021.

C3.1d

(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	So far, the top concerns for our patients are effectiveness of the treatment and cost of the medicine, but we cannot exclude that consumer trends in the future will point towards patients considering environmental impact in their choices for medicine. This is in line with what we are experiencing today within banks and investors' focus and employees focus. Our climate performance and ambitions are becoming more and more important in order to be able to obtain favorable loans and be attractive to investors and to be able to attract the right 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 and prioritizing Climate Action as one of two top priorities in our new Sustainability Strategy that was finally consolidated in January 2020. This means that we will develop and submit for approval a new Science Based Climate target during 2020 with baseline in 2019 and a target year that comply with the required SBT time frame between 5-15 years. Lundbecks 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. 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 cannot exclude that 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.

Supply chain and/or value chain	Yes	Lundbecks partners and suppliers are already today exposed to climate related risks like exposure to extreme weather events and flooding. Most of our suppliers and partners are situated in Europe and USA at locations where extreme weather situations rarely have a character that affect product reliability, but we have some suppliers and partners located in Japan, India and China, primarily at locations that are considered to have a high or medium risk for acute physical risks like flooding, extreme weather events and/or chronic physical risks like drought and temperature rise. Every year a Business Impact Analysis is prepared including the results from 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 identified supplier risk in 2019 was one of our partners located near the coast in Japan. A location that today is considered to have a medium to high risk for riverine and coastal flooding and will remain to have this risk in 2040. The most substantial decision that has been made to reduce the risk for business interruption at this partner is that a second source production outside Japan will be validated and ready to produce by the end of 2020 making the supply more resilient in the future (Time horizon: From 2021 and forward).
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. Due to our signing of the "Business Ambition for 1.5°C" pledge our CRO's, that constitutes a significant part of our scope 3 footprint, will also be enrolled in our scope 3 target activities. During the next 1-10 years we will cooperate with relevant CRO's to explore possibilities for reducing GHG emissions from their activities and when relevant include climate reductions as a part of our contractual matters. Our investments in R&D can also be affected by our ability to obtain favorable 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 and prioritizing Climate Action as one of two high impact priorities in our new Sustainability Strategy that was finally consolidated in January 2020.
Operations	Yes	Lundbecks operations can be affected by both transitional changes like reputation, increasing energy prices and carbon taxes and by damaging weather events like storms and floodings. 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 CO2 strategy and raising our ambitions for CO2 reductions. An important step in 2019 was our decision about entering power purchase agreements for additional renewable energy for our sites. This means that during 2020 we will enter an agreement covering the consumption for our Danish sites and during the next 2 – 3 years agreements covering our sites in Italy and France will also be prepared. This is considered a significant step in achieving our new Science based target with a 1,5°C ambition which will be submitted during 2020. A new SBTi target will also influence our scope 1 emissions during the next 1 – 10 years 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 2019 it was decided to introduce the use of 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. In 2020 it will be established when renovating a building for development activities and it is also included in the building project for a new building for animal facilities and research that will be constructed during the next 1 – 5 years.

C3.1e

(C3.1e) 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: Lundbecks 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 we expect that energy prices and carbon taxes will increase during the next 10 years. The most important method to keep the financial risks from increased energy prices and GHG taxes low, is our CO2 strategy and our focus on year on year energy optimizations. Due to this focus we have reduced our annual electricity costs with app. 27 MDKK since 2006. For many years we have spent app. 3.3 MDKK on energy efficiency activities and we are planning to continue these activities in the years to come. 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 PPA agreement including additional renewable electricity to the grid and a low fixed energy price. Entering a PPA is also a strong and important contribution to Lundbecks climate targets and to our commitment to the “Business Ambition for 1.5°C” of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement. We expect to enter PPA’s for our two Danish sites, our Italian site and our French site during the next 5 years. A long-term (5 – 10 years) PPA 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 will renew our scope 3 inventory and submit a new Science based target. This is increasing our indirect cost with app. 1 MDKK (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. For example do 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 MDKK and the annual cost of audits at suppliers and partners on app 5.8 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 neighboring companies. Both basins were gradually implemented over a 4 year period and integrated in the financial planning process. During the next 2 – 3 years we are planning to establish 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 raised energy considerations and climate risks are always integrated in the decision process for choosing 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. Another example is the installation of a new air emission system 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. In both cases the new solutions require investments and increases capital expenditures. The magnitude of impact differs from case to case e.g. the new air emissions system is expected to require an investment on up to 20 MDKK.

C3.1f

(C3.1f) 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. Recently we have 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. This opportunity has been one of the reasons behind the decision about increasing our ambition for climate actions and signing the "Business Ambition for 1.5°C" pledge and prioritizing Climate Action as one of two high impact priorities in our new Sustainability Strategy that was finally consolidated in January 2020.

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

2018

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)

19,943

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

100

Target year

2026

Targeted reduction from base year (%)

30

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

13,960.1

Covered emissions in reporting year (metric tons CO2e)

15,254

% of target achieved [auto-calculated]

78.3733640876

Target status in reporting year

Underway

Is this a science-based target?

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

Please explain (including target coverage)

Our target cover 100% of our headquarter functions and all our 4 production sites. Our sales affiliates are not covered by the target. Our sales affiliates constitute app. 5% of our total GHG emissions.
Since we achieved our previous target in 2016 we have prepared a new climate target that was decided in 2018. As this target require a 3% annual reduction it 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.

As we have signed the “Business Ambition for 1.5°C” of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement, this target will be replaced by a new Science-Based target in 2020.

Target reference number

Abs 2

Year target was set

2018

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)

Base year

2018

Covered emissions in base year (metric tons CO2e)

15,972

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

100

Target year

2019

Targeted reduction from base year (%)

3

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

15,492.84

Covered emissions in reporting year (metric tons CO2e)

15,254

% of target achieved [auto-calculated]

149.8455630687

Target status in reporting year

Achieved

Is this a science-based target?

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

Please explain (including target coverage)

Apart from our 10 year target we have this supporting annual target. A 3% annual reduction will secure the realization of our long-term target, and a 3% 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)

19,943

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]

5,982.9

Covered emissions in reporting year (metric tons CO2e)

15,254

% of target achieved [auto-calculated]

33.588584609

Target status in reporting year

Underway

Is this a science-based target?

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

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. In 2035 all our 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 fulfill 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?

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 to motivate them to develop ambitious climate targets by 2026. 211 suppliers in all.

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 have climate targets in 2019.

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 have signed the “Business Ambition for 1.5°C” of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement, this target will be replaced by a new Science-Based target in 2020.

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	1	
To be implemented*	7	544
Implementation commenced*	4	72
Implemented*	8	1,078

Not to be implemented	0	

C4.3b

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

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

60

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

250,000

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

750,000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

By cleaning water and air in our ammonia degasser electricity consumption decreases.

Initiative category & Initiative type

Energy efficiency in production processes

Other, please specify

Installation of new water equipment for boilers optimizes boilers energy consumption.

Estimated annual CO2e savings (metric tonnes CO2e)

2

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

15,000

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

855,000

Payback period

>25 years

Estimated lifetime of the initiative

21-30 years

Comment

This optimization is a part of an ordinary maintenance activity.

Initiative category & Initiative type

Energy efficiency in production processes

Other, please specify

Decentralized humidification of lab building as well as shutdown of gas installation.

Estimated annual CO2e savings (metric tonnes CO2e)

13

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

27,000

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

600,000

Payback period

21-25 years

Estimated lifetime of the initiative

Ongoing

Comment

This activity was a part of a large renovation of an existing lab building.

Initiative category & Initiative type

Energy efficiency in production processes

Waste heat recovery

Estimated annual CO2e savings (metric tonnes CO2e)

6

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

95,000

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

250,000

Payback period

1-3 years

Estimated lifetime of the initiative

3-5 years

Comment

Heat recovery of steam from condensate collection.

Initiative category & Initiative type

Energy efficiency in production processes

Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)

11

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

15,000

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

37,500

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

Decrease of the steam pressure in the network from 7 to 6,5 bars (-7%) by changing regulator .

Initiative category & Initiative type

Energy efficiency in buildings

Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)

5

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

7,000

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

20,000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

HVAC systems: optimization running of hot water network system
Use of the heat recovery function on our chillers / Adaptation of the frequency of the secondary pump variators / Motorization of the hot water network valves at the steam exchanges.

Initiative category & Initiative type

Energy efficiency in buildings
Lighting

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)

10,000

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

0

Payback period

<1 year

Estimated lifetime of the initiative

3-5 years

Comment

Replacement of neon lights by LED lights in the 4 buildings saving 80% of consumption. The investment is negligible s it was a part of the ordinary maintenance of light.

Initiative category & Initiative type

Low-carbon energy consumption

Wind

Estimated annual CO2e savings (metric tonnes CO2e)

980

Scope(s)

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

0

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

78,000

Payback period

No payback

Estimated lifetime of the initiative

1-2 years

Comment

In order to reach our annual GHG reduction target on 3% reduction we have had to buy guaranties of origin on electricity in Denmark covering a part of our electricity consumption in 2019. The energy is coming from a new wind farm in Denmark. For many years we have been able to optimize our production and processes. Since 2006 we have reduced our CO2 emission by 68% and our energy consumption by 35%, but quality and environmental requirements along with plans about future business growth makes this development very difficult to continue. Parallel we are raising our climate ambitions and will submit a new Science-Based target in 2020. This will require 4.2% annual reductions and to achieve this we will enter Power Purchase Agreements with renewable energy for our 4 European sites during the next 1 - 5 years. This investment will include guaranties of origin on our electricity to document that our electricity consumption is coming from the plant we are investing in.

C4.3c

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

Method	Comment
Other	One of the most important drivers for investments in emission reduction activities is our GHG reduction targets. Latest we have also signed the Business Ambition for 1,5 degree pledge includes that we will

Our GHG reduction targets and climate ambitions are a strong driver for our emission reduction activities	develop a new Science based target by the end of 2020 which also will be a very strong driver for investments in emission reduction activities. Both our climate target and our joining the “Business Ambition for 1.5°C” of leading companies aligning their business actions with the most ambitious aim of the Paris Agreement, are strong drivers for our decision about entering a Power Purchase Agreement including additional renewable energy in the grid. In 2020 the agreement will be made for our two Danish sites and in 2 – 3 years our Italian and French site will also be covered by Power Purchase Agreements with renewable energy.
Financial optimization calculations	Energy reductions is good business. Since 2006 we have reduced our annual energy costs by app. 27 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.
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 much 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. The reward consists of an annual bonus for meeting short term targets related to energy reduction and GHG emission reduction targets. The short term target is created by breaking down the corporate long term target on GHG emission to business functions. Also the achievement of other Corporate climate targets like our target about submitting a new Science-Based target in 2020 is a part of selected employee 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 catalyzed 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. Lundbecks research, development and production sites and our headquarter are covered by our HSE system, certified according to ISO 14001 and OHSAS 18001. 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.

	Compliance with the SBT guidance and alignment with the Paris agreement is also a strong driver 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 down equipment when it is not in use, optimizing ventilation, temperature control etc. In terms of internal resources, this corresponds to a budget of 1 MDKK and the implementation of energy projects costed 2.2 MDKK in 2019.
Internal price on carbon	Lundbeck have implemented several energy saving activities since 2006. In 2017 energy savings were integrated in our ordinary maintenance and rebuilding activities. Some of these activities require financial investments and are managed through our internal finance system for investments. If the activity includes energy savings, we are able to sell the savings to an energy supplier and the benefit from this is included in the cost for the activity resulting in a lower return on investment. This has been considered as an internal price on carbon and due to this structure, energy activities can be favored over other activities. Due to new approval requirements this is rarely an option anymore. Instead we are developing a business case template for energy projects where we among other things can score the CO2 reductions in a project. This can be considered an indirect carbon price. Currently CO2 reductions are rated higher than pay back times increasing the chance for energy projects to be preferred over other projects.

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, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

6,626

Comment

Lundbeck adopted a new CO2 target in 2018 with 2016 as base year.
Our long-term target commits Lundbeck to cut our scope 1 + 2 CO2 emissions 30% by 2026 when compared to 2016 emission levels.
In 2019 another long-term target was adopted also with base year in 2016: In 2035 Lundbeck will reduce our scope 1 + 2 CO2 emissions by 70% compared to 2016.

Lundbeck have no structural changes in our organization in 2019 that trigger a recalculation of base year emissions, as our organization has made no changes through acquisitions and/or divestments, the methodology or boundary used to calculate our emissions. Hence, we need not to recalculate our base year emissions in order to directly compare it with our current emissions.

Scope 2 (location-based)

Base year start

January 1, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

12,800

Comment

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

Scope 2 (market-based)

Base year start

January 1, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

13,317

Comment

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

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)

7,235

Comment

This Scope 1 emission includes the sum of cooling agents, combustion of natural gas, methan, F-gas, gasoil, emergancy diesel and biooil.

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

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

14,546

Scope 2, market-based (if applicable)

8,018

Comment

CO2 emission from the use of district heating and electricity.

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

Technically 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 do not make up a large 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 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 challenge is difficulties in retrieving information and unreliable data. CO2 emissions are only accounted for sites with research, development and/or production and headquarter functions with 50 FTE or more. In total this is relevant for 4 sites (2 in Denmark, 1 in Italy and 1 in France). This covers about 45% of the organization (regarding employees FTE), but 95% or more of the total energy consumption.

Source

Two new sites i US.

Relevance of Scope 1 emissions from this source

Emissions excluded due to recent acquisition

Relevance of location-based Scope 2 emissions from this source

Emissions excluded due to recent acquisition

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

Emissions excluded due to recent acquisition

Explain why this source is excluded

Lundbeck aquired two new sites in US in 2019. One site was aquired in Q3 2019 and one late in Q4 2019. Calculating the energy consumption of these two sites is applicable for less than 1% of our total energy consumption in 2019. Hence the emissions are not deemed relevant for this year reporting nor is ecalculating our baseline (2016).
This decission is based on the Year- after metod stated in the ”Timing of recalculation for structural changes” section in the GHG protocol. If it is not possible to make a recalculation in the year of the structural change (e.g., due to lack of data for an acquired company), the recalculation may be carried out in the following year. The Year-after metod is described in the ”Base year recalculation methodologies for structural changes”.
Source: https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf
https://ghgprotocol.org/sites/default/files/standards_supporting/Base%20Year%20Adjustments.pdf

The two sites will however be integrated in our next CDP reporting, when we have full year data. Further more Lundbeck plan to recalculate our baseline in late 2020 due to setting a new science based target, where the sites will be fully integrated in our inventory and target setting.

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

113,569

Emissions calculation methodology

Spend data from the 9 main spend categories in “Purchased goods and service” was investigated (Commercial CRO Development, Consultancy, Raw materials, Packaging materials, Other sourcing areas, Professional Services, Marketing, Royalties, Commercial CRO Research). METHODE: Lundbeck use an EXIOBASE v3 database to calculate the CO2 emission. In the database the total 2016 spend data of "Purchased goods and servicec" is converted to CO2 emissions. Data is generated in the Lundbeck corporate sourcing system and cover 95-

100% of the spend. The value is a constant of 113569 tones CO2/year for 5 years (2021). The emission is 48.9% of our total combined scope 1+2+3 in 2019) – a 1.4% decrease compared to 2018.

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

0

Please explain

No data obtained directly from suppliers or value chain partners. A few years back we collected data directly from our 30 biggest suppliers of chemicals ans packaging materials. However this was difficult and not all data was provided by the suppliers. Today data is generated in the Lundbeck corporate sourcing system and cover 95-100% of the spend. In the database spend data is converted to CO2 emissions. CO2 emission from 2016 spend data on purchased goods (9 main spend categories). Constant value of 113569 tones CO2/year until reevaluated in 5 years (2021). (During 2020 a new scope 3 inventory and emission-management-system will be integrated by Lundbeck. By 2021 the new scope 3 enventory will be reported.)

Calculation of Lundbeck's scope 3 GHG emissions in this yers CDP reporting are based on economic spend data from Lundbeck and the multi-regional hybrid input-output database Exiobase. Exiobase is a global detailed multi-regional environmentally extended input output database. The Exiobase v3 database (http://www.exiobase.eu/) is the product of in total four large EU funded projects under the 6th and 7th framework programmes: FORWAST (http://forwast.brgm.fr/), EXIOPOL (http://www.feemproject. net/exiopol/), CREEA (http://www.creea.eu/) and DESIRE (http://fp7desire.eu/). Exiobase can be used for national level footprints (http://www.exiobase.eu/index.php/9-blog/27-creea-booklet) as well as for detailed corporate footprints, e.g. see http://lca-net.com/p/2343. Source for EXIO databasen: Merciai S, Schmidt J (2017). Methodology for the construction of global multi-regional hybrid supply and use tables for the EXIOBASE v3 database. Journal of Industrial Ecology, early on line view 12 December 2017. http://onlinelibrary.wiley.com/doi/10.1111/jiec.12713/full

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

29,087

Emissions calculation methodology

Spend data from the 4 main spend categories in “Capital goods” was investigated (IT/Telecommunication, Lab equipment, Building and machines, FM services: Office and Canteen-related). METHODE: Lundbeck use an EXIOBASE v3 database to calculate the CO2. In the database the total 2016 spend data from "Capital goods" is converted to CO2 emissions. Data is generated in the Lundbeck corporate sourcing system and cover 95-100% of the spend. The value is a constant of 29087 tones CO2/year for 5 years (2021). The emission is 12,5% of our total combined scope 1+2+3 in 2019 – a 1.4% decrease compared to 2018.

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

0

Please explain

No data obtained directly from suppliers or value chain partners. Data is generated in the Lundbeck corporate sourcing system and cover 95-100% of the spend. CO2 emission from 2016 spend data on Capital goods (4 main spend categories). Constant value of 29087 tones CO2/year until reevaluated in 5 years (2021). (During 2020 a new scope 3 inventory and emission-management-system will be integrated by Lundbeck. By 2021 the new scope 3 enventory will be reported.)

At Lundbeck we focus on low energy consuming equipment as an important parameter when buying new equipment. We always conduct a risk assessment when sourcing new equipment to e.g. assess the energy consumption or use of raw materials. Emissions from the use of capital goods by Lundbeck is accounted for in scope 1 or scope 2. Calculation of Lundbeck’s scope 3 GHG emissions are based on economic spend data from Lundbeck and the multi-regional hybrid input-output database Exiobase. Exiobase is a global detailed multi-regional environmentally extended input output database. The Exiobase v3 database (http://www.exiobase.eu/) is the product of in total four large EU funded projects under the 6th and 7th framework programmes: FORWAST (http://forwast.brgm.fr/), EXIOPOL (http://www.feemproject. net/exiopol/), CREEA (http://www.creea.eu/) and DESIRE (http://fp7desire.eu/). Exiobase can be used for national level footprints (http://www.exiobase.eu/index.php/9-blog/27-creea-booklet) as well as for detailed corporate footprints, e.g. see http://lcanet. com/p/2343. Source for EXIO databasen: Merciai S, Schmidt J (2017). Methodology for the construction of global multi-regional hybrid supply and use tables for the EXIOBASE v3 database. Journal of Industrial Ecology, early on line view 12 December 2017. http://onlinelibrary.wiley.com/doi/10.1111/jiec.12713/full

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

Evaluation status

Not relevant, explanation provided

Please explain

Lundbeck do not have production of fuels and energy purchased and consumed that are not included in scope 1 or scope 2.
Emissions from the combustion of fuels or energy consumed is already accounted for in our scope 1 and 2 (Market based Scope 2 method is used). Extraction, production, and transportation of fuels is not part of our business - nor is generation of energy (electricity, steam, heating, and cooling). Lundbeck have a very energy low production, hence upstream/downstream emissions of purchased fuel/electricity (mining of coal, refining of gasoline, transmission and distribution of natural gas, production of biofuels etc.) is an insignificant factor on our scope 3 emissions. By 2021 a new reporting methodology will be adopted by Lundbeck, due to having a new scope 3 inventory calculating system - hence this category will be reported as well by next CDP reporting cycle.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

10,900

Emissions calculation methodology

Spend data from distribution. METHODE: Lundbeck use an EXIOBASE v3 database to calculate the CO2 emission. In the database total 2016 spend data on "Upstream transportation and distribution" is converted to CO2 emissions. Data is generated in the Lundbeck corporate sourcing system and cover 95-100% of the spend. The value is a constant of 10900 tones CO2/year for 5 years (2021). The emission is 4.7% of our total combined scope 1+2+3 in 2019 – a 1.4% decrease compared to 2018.

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

0

Please explain

No data obtained directly from suppliers or value chain partners. Data is generated in the Lundbeck corporate sourcing system and cover 95-100% of the spend. Scope 3 emissions from transportation of products purchased by Lundbeck. CO2 emission from total 2016 spend data on "Upstream transportation and distribution". Constant value of 10900 tones CO2/year until reevaluated in 5 years (2021). (During 2020 a new scope 3 inventory and emission-management-system will be integrated by Lundbeck. By 2021 the new scope 3 enventory will be reported.)

Calculation of Lundbeck's scope 3 GHG emissions in this yers reporting are based on economic spend data from Lundbeck and the multi-regional hybrid input-output database Exiobase. Exiobase is a global detailed multi-regional environmentally extended input output database. The Exiobase v3 database (http://www.exiobase.eu/) is the product of in total four large EU funded projects under the 6th and 7th framework programmes: FORWAST (http://forwast.brgm.fr/), EXIOPOL (http://www.feemproject. net/exiopol/), CREEA (http://www.creea.eu/) and DESIRE (http://fp7desire.eu/). Exiobase can be used for national level footprints (http://www.exiobase.eu/index.php/9-blog/27-creea-booklet) as well as for detailed corporate footprints, e.g. see http://lca-net.com/p/2343. Source for EXIO databasen: Merciai S, Schmidt J (2017). Methodology for the construction of global multi-regional hybrid supply and use tables for the EXIOBASE v3 database. Journal of Industrial Ecology, early on line view 12 December 2017. http://onlinelibrary.wiley.com/doi/10.1111/jiec.12713/full

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

6,172

Emissions calculation methodology

Only chemical waste from our 2 sites in Denmark and Non hazardous waste from our 4 sites in Denmark, Italy and France are reported as source data. In total 10 fractions of waste are accounted for: glass, paper, cardboard, plastic PET, plastic LPDE, rubble, chemical waste, wood, concrete and rock wool).This cover 85% of the waste.
The emission accounts for 2,7% of our total combined scope 1+2+3 emission in 2019 - 2232 tons more than 2018. This is due to new reported categories of waste from France and Italy is now part of the inventory as well as 13.3% more chemical waste in 2019 compared to 2018 (as a result of more production activities).

METHOD: The web-based calculator "Klimakompasset" is used to sum up the specific emissions form the different types of non hazardous waste. Chemical waste is calculated in co-operation with our national waste disposal facility "Fortum". Primary data originates from Denmark only and cover 85% of the country total - data is then extrapolated to 100%.
99% of our total waste is either recycled or incineration at plants where the energy is used for heat and power production. Less than 1% of our total waste ends up as landfill.

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

85

Please explain

Data obtained directly from suppliers or value chain partners. Lundbeck use supplier data obtained directly from the waste treatment supplier on the tonnage of waste recieved/handled. Waste generated in operations: The web-based calculator "Klimakompasset" is used to sum up specific CO2 emissions from different types of non hazardous waste. Klimakompasset: www.klimakompasset.dk
Liquid Chemical waste: The supplier provide a emissionfactor and an annual sum of hazardous waste delivered by Lundbeck. This data is used to calculate the specific CO2 emissions from liquid chemical waste.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

6,407

Emissions calculation methodology

Transportation of employees in business related activities (air travel and employees driving in own car for business meetings).
AIR TRAVEL: Our travel company reports data directly to Lundbeck about emissions from fuel by plane in several EU and non-EU countries. The calculation is based on the miles from short, medium or long haul respectively.
Emission factors are based on the guidelines produced by DEFRA’s GHG Conversion Factors. The value represents Total Green House Gas

(GHG) emissions. • This method evaluates flights based on airport locations and calculates emissions based upon the actual distance flown. • The total emissions of carbon dioxide equivalent (CO2e kg) include carbon dioxide, plus methane (CH4) and nitrous oxide (N2O), converted to carbon dioxide equivalents.
PRIVATE CAR: Emissions from private car in Denmark, driving to and from business related meetings. Our employees report their mileage (km) in a central system and the total mileage (km) is converted to liters of fuel (1 liter of fuel = 15 km). The fuel is then converted to kg CO2 emission (1 liter of fuel = 2.5 kg/CO2).
The data covers about 65% of the total Lundbeck travel activity from air and car from/to Denmark. Extrapolated to 100% the number is 6407.
The emission accounts for 2.8% of our total combined scope 1+2+3 emission in 2019 - increase of 1354 tons CO2 compared to 2018, due to new source data from China is now part of our inventory.

A key element in doing business at Lundbeck is through engagement with stakeholders in many different capacities through face to face dialogues, conferences, meetings and other. As a company with global outreach, this means that we will always travel for various meetings, quality audits, conferences and other. To facilitate other means of engagement Lundbeck encourages alternatives to travelling. We have have rolled out Skype for Business, Teams and online conversations.

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

65

Please explain

Data are obtained directly from our travel partners. Annual calculations on CO2 emission is provided to Lundbeck in a report. The Green House Gas Protocol is used: Factors and calculations for conversion are for global data (http://ghgprotocol.org/about-ghgp).

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

8,021

Emissions calculation methodology

Scope 3 emissions from transportation of employees between their home and worksite is considered relevant - but it is a difficult area to investigate. There are many variables to estimate emission for all sites taking into account average commuting modes (bus, car, train, subway, plane, boat, bicycle, walk) depending on the site location. Hence we have not assessed the emissions by conducting a specific survey. Instead we have used a general factor for the average FTE and multiplied by the total number of FTE.
The factor used is: 1,465 ton CO2/employee (found by using calculation model based on numbers from piers). The Average-data method, has been used for this purpose, as the Fuel-based method and the Distance-based method will be almost impossible to complete. However we are aware that using a general factor based on the Average data method is not very accurate, as it is based on a lot of assumptions. The CO2 emission from employee commuting contribute to 3.5% of our total scope 1,2 and 3 emissions in 2019 - a 4.9% increase compared to 2018. This rise is due to more employees in 2019 compared to 2018.

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

0

Please explain

No data obtained directly from our employees or from their commuting patterns.

Upstream leased assets

Evaluation status

Relevant, calculated

Metric tonnes CO2e

4,637

Emissions calculation methodology

The emissions are based on reports from the leasing companies on company cars leased by Lundbeck. Available information on 198 company cars in Lundbeck (registered in Denmark (190) and Italy (8)). This corresponds to about 15% 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 from upstream leased assets is calculated for all cars at Lundbeck by extrapolating from 15% to 100%. The emission

accounts for 2.0% of our total combined scope 1+2+3 emission in 2019 - a 0.7% increase compared to 2018.

METHODE: Lundbeck receive the amount of fuel used from our leasing partner and make a calculation to CO2 emission. The emission factors used is 2.65 kg CO2/liter diesel and 2.35 kg CO2/l gasoline.

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

15

Please explain

Based on fuel consumption data directly from our leasing companies. 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.

Two other potential relevant categories to include could be production equipment and IT-equipment. In Lundbeck we own our own production equipment and store data in-house (virtual servers). Therefore we do not have these type of material upstream leased assets and find this insignificant.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

4,540

Emissions calculation methodology

Transportation of products to end user. Emissions from fuel by transportation in Denmark, Europe and overseas. Each transportation mode is taken into account (truck, railway, ship, airplane). Trucks with EURO Norm 5 (using less fuel and emitting less particles and CO2) or above are required by Lundbeck.

METHODE: Distribution companies have to send in a report on CO2 emissions every 3 months to Lundbeck (this is part of our written contract with the transportation company). The emission accounts for 2,0% of our total combined scope 1+2+3 emission in 20189 - a 4.7% decrease compared to 2018. All calculations have been done by the companies by adopting the internationally recognized 'GHG Protocol Product Lifecycle Accounting and Reporting Standard'.

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

100

Please explain

All data originates directly from our distributors by reporting CO2 emissions every 3 months.

Processing of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

33,392

Emissions calculation methodology

Lundbeck have CMO activities at our site in France and Italy. The CO2 emission from the production of these products is already calculated as a part of the total energy consumption (and scope 1 and 2 emission) from Lundbeck production. Spend data on Processing of sold products (in 4 main spend categories: CMO, global marketing activities, congress, events. Data is generated in the Lundbeck corporate sourcing system and cover 95-100% of the spend.

METHODE: Lundbeck use an EXIOBASE v3 database to calculate the CO2 emission. In the database the total 2016 spend data on "Processing of sold products" is converted to CO2 emissions. The value is a constant of 33392 tones CO2/year for 5 years (2021). The emission is 14.4% of our total combined scope 1+2+3 in 2019 - a 1.4% decrease compared to 2018.

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

0

Please explain

No data obtained from suppliers or value chain partners. Calculation of Lundbeck's scope 3 GHG emissions are based on economic spend data from Lundbeck and the multi-regional hybrid input-output database Exiobase.

Exiobase is a global detailed multiregional environmentally extended input output database. The Exiobase v3 database (http://www.exiobase.eu/) is the product of in total four large EU funded projects under the 6th and 7th framework programmes: FORWAST (http://forwast.brgm.fr/), EXIOPOL (http://www.feemproject. net/exiopol/), CREEA (http://www.creea.eu/) and DESIRE (http://fp7desire.eu/). Exiobase can be used for national level footprints (http://www.exiobase.eu/index.php/9-blog/27-creea-booklet) as well as for detailed corporate footprints, e.g.
see http://lca-net.com/p/2343. Source for EXIO databasen: Merciai S, Schmidt J (2017).
Methodology for the construction of global multi-regional hybrid supply and use tables for the EXIOBASE v3 database. Journal of Industrial Ecology, early on line view 12 December 2017. htttp://onlinelibrary.wiley.com/doi/10.1111/jiec.12713/full Lundbeck products are not sold for use in other companies' processes or in other ways further processed. The category is therefore only material to Lundbecks's carbon footprint on CMO, global marketing activities, congress, events.

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

The use of our products does not induce carbon emissions in the use phase. Lundbeck produce pharmaceuticals - not equipment designed to consume or save energy (or emit CO2 when in use), hence we do not see any CO2 emission regarding use of sold products (both direct use-phase emissions and indirect use-phase emissions). The products sold have insignificant lifetime emission, nor emissions associated with maintenance of sold products during use. Therefore this category is not relevant to us and is insignificant.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Lundbeck does not see any significant emission producing activities regarding end of life treatment of sold products. The disposal of unused pharmaceuticals from the end user/hospitals/pharmacy, is very small, as most pharmaceuticals are used for treatment (consumed by the patient) and do not end up as waste. The end-of-life treatment methods used by consumers is disposal by urin/feaces in waste water or by waste of unused medicin (flushing in toilet or disposed in the waste bin). The CO2 emission from incineration of the consumer disposed pharmaceudicals, leaflets, blister pack, tablet container ect. is deemed insignifict due to the small volumes and not further evaluated by Lundbeck. Therefore this is not relevant to us as medicin is not using a lot of energy nor emitting much CO2 when handled as waste (incinerated). The category is not expected to be significant.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

This category is insignificant and therefore not relevant to track. Lundbeck does not have any products leased to customers or other activities regarding downstream leased assets, therefore this area has not been evaluated as this is not relevant to us.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Lundbeck have no business operating under a license to sell or distribute another company’s goods or services nor other franchise activities, therefore this area has not been evaluated as this is not relevant to us. The category is not relevant.

Investments

Evaluation status

Relevant, calculated

Metric tonnes CO2e

162

Emissions calculation methodology

METHODE: Lundbeck use corporate Partnership production data to calculate the CO2 emission. The number of products/items is multiplied by our intensity figure of "ton CO2 per unit produced". In 2019 the figure was 6.773 g CO2 pr. unit. Equvivalent to x tons CO2. The data show this emission is 0.1% of our total combined scope 1+2+3 in 2019 - a 4.2% decrease compared to 2018. Data is generated by the Lundbeck corporate reporting system and cover all produced by our Partners.

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

100

Please explain

Production data originates directly from the value chain partners. Operation of investments (partnerships and co-production with other companies).

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

Lundbeck do not have any major activities regarding other upstream activities, therefore this area has not been evaluated as this is not relevant to us. The category is therefore insignificant.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

Lundbeck do not have any major activities regarding other downstream activities, therefore this area has not been evaluated as this is not relevant to us. The category is therefore insignificant.

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	235	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

0.8954

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

15,254

Metric denominator

unit total revenue

Metric denominator: Unit total

17,036

Scope 2 figure used

Market-based

% change from previous year

1.57

Direction of change

Increased

Reason for change

REDUCTION ACTIVITIES: Lundbeck saved 385 MWh (310 MWh in electricity and 75 MWh in gas) on energy reducing projects at our site in Valby, Denmark. The projects conserned Ammonia degasser, Water treatment system and Steam cut off. Additional other 4 energy projects was done at our other sites reducing the total consumption of energy by 1.2%. Despite lower CO2 emission factors in 2019, energy reduction projects, favorable weather conditions and purchasing of certificates of origin on electricity in Denmark – resulting in a 4,5% overall CO2 reduction (718 tons) - the intensity figure is increasing. This is due to lower revenue (1081 mio. DKK - equals 6.0%) bringing the intensity figure up compared to 2018. Metric denominator: Unit total is provided in mio. DKK

Intensity figure

2.63

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

15,254

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

5,806

Scope 2 figure used

Market-based

% change from previous year

11.15

Direction of change

Decreased

Reason for change

REDUCTION ACTIVITIES: Lundbeck saved 385 MWh (310 MWh in electricity and 75 MWh in gas) on energy reducing projects at our site in Valby, Denmark. The projects conserned Ammonia degasser, Water treatment system and Steam cut off. Additional other energy projects was done at our other sites.

Decrease due to energy reduction projects, favorable weather conditions and purchance of certificates of origin on electricity in Denmark, is the main reason for the CO2 reduction in 2019 compared to 2018. The intensity figure is based on a higher number of FTE (423 people more - equals 7.9%) and less emission of CO2 (718 tons - equals 4,5%) compared to 2018.

Intensity figure

0.000006773

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

15,254

Metric denominator

unit of production

Metric denominator: Unit total

2,252,128,380

Scope 2 figure used

Market-based

% change from previous year

4.23

Direction of change

Decreased

Reason for change

REDUCTION ACTIVITIES: Lundbeck saved 385 MWh (310 MWh in electricity and 75 MWh in gas) on energy reducing projects at our site in Valby, Denmark. The projects conserned Ammonia degasser, Water treatment system and Steam cut off. Additional other energy projects was done at our other sites.

Decrease due to energy reduction projects, favorable weather conditions and perchance of certificates of origin on electricity in Denmark, is the main reason for the CO2 reduction in 2019 compared to 2018. The intensity figure is based on a lower productions volume (6065720 units less - equals 0.3%) and less emission of CO2 (718 tons - equals 4.5%) compared to 2018.

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	7,234	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	1	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	3,286
Italy	2,676
France	1,273

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	1,997	55.658035	12.516765
Site Lumsås, Denmark	1,289	55.94317	11.512057
Site Padova, Italy	2,676	45.410201	11.926138
Site Elaiapharm, France	1,273	43.628082	7.051954

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Biooil	235
Methane	3,949
Gasoil	1,008
F -gas (LPG)	45
Towngas/Citygas	1,985
HFC (R134a)	1
Emergency diesel for generators	12

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	10,750	4,801	35,978	21,018
Italy	3,411	2,825	7,063	2,147
France	385	392	6,874	825

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, certificates of origin and grid mix of district heating. 72% of the electricity originates from renewable energy sources (wind mills, solar, water, biogas). 61% of the fuel used for generating district heating originates for biofules (hay, biomass, organic waste, wood pellets). Self generated: Steam is made by use of towngas. Cooling by use of electricity.	8,447	3,605

Site Lumsås, Denmark Purchased and consumed low-carbon electricity. Originates from grid mix of electricity. 72% of the electricity originates from renewable energy sources (wind mills, solar, water, biogas). Self generated: Steam is made by use of towngas. Cooling by use of electricity.	2,303	1,196
Site Padova, Italy Purchaced electricity only. Self generated: Steam and heat is made by use of methane. Cooling by use of electricity.	3,411	2,825
Site Elaiapharm, France Purchaced electricity only. Self generated: Steam and heat is made by use of methane. Cooling by use of electricity.	385	392

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	12,159	7,091
Purchased district heating	2,386	927

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 energy consumption	980	Decreased	6.1	Change in renewable energy consumption: The change in emissions due to change in purchased renewable energy is attributed to certificates of origin of renewable energy. 2559 MWh electricity in Denmark bought as certified carbon neutral (certificates of origin of renewable energy) from our supplier. 2559 MWh x 0,383 tons CO2/MWh = 980 tons CO2. Corresponds to 6.1% reduction. Formula: ((-980/15973)*100) = -6.1 ((change in scope 1+2 emissions attributed change in renewable energy consumption)/(previous year scope 1+2 emissions)*100).
Other emissions reduction activities	98	Decreased	0.6	Other emission reduction activities: The change in emissions due to other reduction activities is attributed to proactive emission reduction initiatives at our production sites. In 2019 Lundbeck implemented on 7 energy conserving initiatives and hence lovered our energy consumption by by 1.2%. The total annual savings was 98 tons CO2. For instance, we optimized an Ammonia degasser and achieved an annual saving on 300 MWh, which is equivalent to the annual energy consumption of approx. 12 households. Total decrease in CO2 due to energy projects is: 98 tons CO2. This corresponds to 0.6 %. Formula: ((98/15973)*100) = 0.6 ((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 2019.

Acquisitions	0	No change	0	Lundbeck aquired two new sites in US in 2019. One site was aquired in Q3 2019 and one late in Q4 2019. Calculating the CO2 emission of these two sites on a full year basis is applicable for 4 % of our total (621 tons CO2). However having only been operating for Lundbeck from Q3 and late Q4 the consumption is less than 1% of our total energy consumption in 2019 (621/4=155 tons CO2). This decission is based on the Year- after metod stated in the ”Timing of recalculation for structural changes” section in the GHG protocol. If it is not possible to make a recalculation in the year of the structural change (e.g., due to lack of data for an acquired company), the recalculation may be carried out in the following year. The Year-after metod is described in the ”Base year recalculation methodologies for structural changes”. Source: https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf https://ghgprotocol.org/sites/default/files/standards_supporting/Base%20Year%20Adjustments.pdf The emissions are not deemed relevant for this year reporting cycle nor is recalculating our baseline (2016). The two sites will however be integrated in our next CDP reporting, when we have full year data. Further more Lundbeck plan to recalculate our baseline in late 2020, due to setting a new science based target, where the sites will be fully integrated in our inventory and target setting.
Mergers	0	No change	0	Not relevant for Lundbeck in 2019.
Change in output	0	No change	0	Not relevant for Lundbeck in 2019.
Change in methodology	805	Decreased	5	Change in methodology: The change in emissions due to change in methodology is attributed to change in emission factors. Change in emission factors: Primarily due to more green electricity (primarily wind) in the Danish grid, emission factor for biooil has decreased and not using the mean of the last 3 years for calculating the emission factor. Now the newest possible emission factor (typically last year) is used. Total reduction due to changed CO2 factors in 2019 is: 805 tons CO2. This corresponds to 5.0% reduction. Formula: ((-805/15973)*100) = -5.0 ((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	Not relevant for Lundbeck in 2019.

Change in physical operating conditions	0	No change	0	Not relevant for Lundbeck in 2019.
Unidentified	431	Increased	2.7	2.7% not identified. Formula: ((431/15973)*100) = 2.7 ((change in scope 1+2 emissions not identified)/(previous year scope 1+2 emissions)*100). This increase is partly due to our annual production mix differ and other elements not accounted for in the avove.
Other	723	Increased	4.5	Change in physical operating conditions: More gasoil used over biooil at our Lumsås Site, Denmark during rebuilding of the biooil boiler and extra need for test run. The extra gasoil consumed, is due to use of a rented gasoil fueled boiler during the construction period, resulting in less biooil used. CO2 emission increase as gasoil has a 3,5 times higher emission factor than biooil. Total reduction due to change in physical operating conditions in 2019 is: 723 tons CO2. This corresponds to 4.5% increase. Formula: ((723/15973)*100) = 4.5 ((change in scope 1+2 emissions attributed to Change in physical operating conditions)/(previous year scope 1+2 emissions)*100).

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	No

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	8,201	35,021	43,222
Consumption of purchased or acquired electricity		21,253	17,078	38,331
Consumption of purchased or acquired heat		7,066	4,518	11,584
Total energy consumption		36,520	56,617	93,137

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)

Vegetable Oil

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

8,201

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

3,280

MWh fuel consumed for self-generation of steam

4,921

Emission factor

0.02806

Unit

metric tons CO2 per MWh

Emissions factor source

https://nlmv.dk/ Our contact at NLM Vantinnge provides the annual emission factor. Proof of sustainability (document) provided by the supplier NLM Vantinge.

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

LHV (lower heating value)

Total fuel MWh consumed by the organization

19,330

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

7,732

MWh fuel consumed for self-generation of steam

11,598

Emission factor

0.20432

Unit

metric tons CO2 per metric ton

Emissions factor source

http://key2green.dk/n%C3%B8gletal-naturgas

Comment

Used at our sites in France and Italy for heat and steam. 40% for heat and 60% for steam.

Fuels (excluding feedstocks)

Town Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

11,676

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

11,676

Emission factor

0.17

Unit

metric tons CO2 per MWh

Emissions factor source

The 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)

Liquefied Petroleum Gas (LPG)

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

190

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

190

MWh fuel consumed for self-generation of steam

0

Emission factor

0.235

Unit

metric tons CO2 per MWh

Emissions factor source

From the supplier, Primagaz.
http://www.primagaz.dk/

Comment

Used for production of heat only.

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

42

MWh fuel consumed for self-generation of electricity

42

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

Emission factor

0.288

Unit

metric tons CO2 per MWh

Emissions factor source

http://www.key2green.dk/forskellige-omregningsfaktorer

Comment

Used to testrun our emergancy generators.

Fuels (excluding feedstocks)

Gas Oil

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

3,784

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

1,514

MWh fuel consumed for self-generation of steam

2,270

Emission factor

0.2664

Unit

metric tons CO2 per MWh

Emissions factor source

http://key2green.dk/n%C3%B8gletal-fyringsolie-tr%C3%A6-og-halm

Comment

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

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

Unbundled energy attribute certificates, Renewable Energy Certificates (RECs)

Low-carbon technology type

Wind

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

Denmark

MWh consumed accounted for at a zero emission factor

2,559

Comment

Denmark: 2559 MWh electricity bought from the supplier with specific Certificates of origin. This corresponds to 6.7% of our scope 2. The electricity originates from Danish wind power only. Certficates bought as "New wind" indicating mills are no older that 2 years. The specific mill is Nissum Bredning mill 1-4 (7MW). Electricity produced in the period 01.01.2019 - 31.12.2019.

Sourcing method

Heat/steam/cooling supply agreement

Low-carbon technology type

Biomass

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

Denmark

MWh consumed accounted for at a zero emission factor

7,066

Comment

Purchased and consumed low-carbon heat in Denmark originates from grid mix of district heating.
61% of the fuel used for generating district heating originates from (hay, biomass, organic waste, wood pellets).

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

Denmark

MWh consumed accounted for at a zero emission factor

11,393

Comment

Purchased and consumed low-carbon electricity in Denmark originates from grid mix.
72% of the electricity originates from renewable energy sources (wind mills, solar, water, biogas).

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

Italy

MWh consumed accounted for at a zero emission factor

2,147

Comment

Purchased and consumed low-carbon electricity in Italy originates from grid mix.
30.4% of the electricity originates from mix of renewable energy sources.

Sourcing method

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

Low-carbon technology type

Nuclear

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

France

MWh consumed accounted for at a zero emission factor

825

Comment

Purchased and consumed low-carbon electricity in france originates from grid mix.
12% of the electricity originates from neuclear.

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

4,400

Metric numerator

Tonnes of virgin solvents used due to recovery.

Metric denominator (intensity metric only)

% change from previous year

21.4

Direction of change

Decreased

Please explain

At Lundbeck solvents are recovered and reused several times. In 2019 our target was "Recycling of 75% of the 10 most used solvents.
In 2019, we managed to recover 67% of the most used solvents. This elimination of the need to purchase approx. 4.400 tons of virgin solvents and consequently saved additional resources for external production, transportation (equivalent to 145 road tankers) and waste management. This corresponds to 3062 tonnes CO2 saved by not producing new solvents (0,696 kg/CO2/kg solvent waste * 4400 tonnes). Total use of solvents in 2019 was 8443 tonnes.
However, this is a reduction in solvent recovery compared to 76% in 2018 (3898 tons), and we did not fulfil the target of recycling 75% of the 10 most used solvents. The decrease (less solvents recovered) was 21.4% compared to 2018.

The explanation for the reduction is that the possibilities for recycling vary with the production processes. At our production site in Italy, 55% of the used solvent was recycled in 2019. This was done by an external contractor. We remain dedicated to exploring solvent recovery possibilities and will develop best practices across our two chemical production sites. Our target for 2020 is to recover 55% of the solvents used in chemical production across our sites in Denmark and Italy, which explains why the target recovery percentage is lower than previous years.

Description

Energy usage

Metric value

235

Metric numerator

Tons CO2 from liters of biooil consumed

Metric denominator (intensity metric only)

% change from previous year

71.8

Direction of change

Decreased

Please explain

Biooil: CO2 reducing project by using biooil (by-product from the production of sunflower- and rapeseed oil). Used for heat/steam in Site Lumsås, Denmark. 24.9% less biooil (299720 liters) was used in 2019 compared to 2018. By using more biooil and less fossil fuel we reduce the emission of CO2. However having maintanance issues and technical problems with the biooil boiler, Lundbeck had to use gasoil as primary fuel for a period of time. The emissionfactor for gasoil is 9.3 times higher than biooils - hence regretfully having emitted more CO2 in the process.

The emission factor for biooil is provided by the supplier. As the emission factor has decreased from 0.0762 tonnes CO2 pr. MWh in 2018 to 0,0286 tonnes CO2 pr. MWh in 2019, the CO2 emission in 2019 is lower for the actual biooil consumed compared to 2018. A difference of 597 tonnes of CO2, as the emission in 2019 was only 235 tonnes. The emission in 2018 was 832 tonnes CO2. This corresponds to a 71.8% decrese in CO2 emission in 2019 compared to 2018.

Description

Other, please specify

Supplier evaluation

Metric value

2

Metric numerator

Number of suppliers not approved.

Metric denominator (intensity metric only)

% change from previous year

200

Direction of change

Increased

Please explain

Supplier evaluation: HSE audits (questionnaires and on-site visits) are conducted on our main chemical suppliers in high risk countries alongside Quality audits. On these audits questions on energy consumption and CO2 emission are always addressed. If standards on environmental issues (waste water, air pollution, soil pollution, waste management etc..) are not acceptable the supplier is not approved. In 2019 Lundbeck conducted 14 supplier audits (India, China, Taiwan, South Africa and South Korea).
Of the 14 audits - 2 suppliers was not approved. In 2018 of 10 audits - all suppliers was approved. This is an increase of 200% - that in a way is a good thing, as these suppliers - due to the evaluation/audit- is not part of the Lundbeck supply chain.

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

2

CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf

COP_2019.pdf

Page/ section reference

#1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf"
#2: UN Global Compact 2019 Communication on Progress report. See page 20-21. Attachment: "COP_2019.pdf"

Relevant standard

ASAE3000

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

2

CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf

COP_2019.pdf

Page/ section reference

#1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf"
#2: UN Global Compact 2019 Communication on Progress report. See page 20-21. Attachment: "COP_2019.pdf"

Relevant standard

ASAE3000

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

1

CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf

Page/section reference

#1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf"

Relevant standard

ASAE3000

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?

CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf

COP_2019.pdf

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C6. Emissions data	Year on year change in emissions (Scope 1)	ASAE3000	Scope 1: 1.8% increase in 2019 compared to 2018. Verified by Deloitte during our annual review of HSE data in January 2020. Emission Scope 1, 2018 = 7110 tons CO2. Emission Scope 1, 2019 = 7235 tons CO2. Increase in Scope 1 from 2018-2019 = 125 tons CO2. Reason for increase is due to more gasoil used in 2019, as biooil boiler was under maintanance. #1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf" #2: UN Global Compact 2019 Communication on Progress report. See page 20-21. Attachment: "COP_2019.pdf" 1, 2

C6. Emissions data	Year on year change in emissions (Scope 2)	ASAE3000	Scope 2: 9.5% decrease in 2019 compared to 2018. Verified by Deloitte during our annual review of HSE data in January 2020. Emission Scope 2, 2018 = 8863 tons CO2. Emission Scope 1, 2019 = 8018 tons CO2. Decrease in Scope 2 from 2018-2019 = 845 tons CO2. Reason for decrease is primarily due to less district heating used. #1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf" #2: UN Global Compact 2019 Communication on Progress report. See page 20-21. Attachment: "COP_2019.pdf" 1, 2
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ASAE3000	Scope 3: 1.9% increase in 2019 compared to 2018. Verified by Deloitte during our annual review of HSE data in January 2020. Emission Scope 3, 2018 = 212877 tons CO2. Emission Scope 3, 2019 = 216887 tons CO2. Increase in Scope 3 from 2018-2019 = 4010 tons CO2. Reason for increase is primarily due to more emissions from Business travel and Waste generated in operations, as source data from more countries is now part of our inventory. #1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf" 1
C6. Emissions data	Change in Scope 1 emissions against a base year (not target related)	ASAE3000	Scope 1: 9.2% increase in 2019 compared to base year 2016. Verified by Deloitte during our annual review of HSE data in January 2020. Emission Scope 1, 2016 = 6626 tons CO2. Emission Scope 1, 2019 = 7235 tons CO2. Increase Scope 1, 2016-2019 = 609 tons CO2. Reason for increase is due to more gasoil used in 2019, as biooil boiler was under maintanance. #1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf"

			#2: UN Global Compact 2019 Communication on Progress report. See page 20-21. Attachment: "COP_2019.pdf" 1, 2
C6. Emissions data	Change in Scope 2 emissions against a base year (not target related)	ASAE3000	Scope 2: 39.8% decrease in 2019 compared to base year 2016. Verified by Deloitte during our annual review of HSE data in January 2020. Emission Scope 2, 2016 = 13317 tons CO2. Emission Scope 2, 2019 = 8018 tons CO2. Decrease Scope 2, 2016-2019 = 5299 tons CO2. Reason for decrease is due to less electricity and districh heating used as well as purchase of certificates of origing for green electricity in Denmark. #1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf" #2: UN Global Compact 2019 Communication on Progress report. See page 20-21. Attachment: "COP_2019.pdf" 1, 2
C6. Emissions data	Change in Scope 3 emissions against a base year (not target related)	ASAE3000	Scope 3: 0.7% decrease in 2019 compared to base year 2013. Scope 3 from Business travel has been verified by Deloitte in January 2020. Emission Scope 3 (Business travel), 2013 = 6455 tons CO2. Emission Scope 3 (Business travel), 2019 = 6407 tons CO2. Reduction Scope 3 (Business travel), 2013-2019 = 48 tons CO2. This is due to more virtual meetings and focused travel policy. #1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf" 1

C4. Targets and performance	Progress against emissions reduction target	ASAE3000	Target: 23.5% decrease in 2019 compared to base year 2016. Verified by Deloitte during our annual review of HSE data in January 2018. Reduction target is 30% by 2026 compared to base year 2016. Total reduction from 2016-2019 = 4689 tons CO2. #1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf" #2: UN Global Compact 2019 Communication on Progress report. See page 20-21. Attachment: "COP_2019.pdf" 1, 2
C4. Targets and performance	Year on year change in emissions (Scope 3)	ASAE3000	Scope 1 and 2: 4.5% decrease in 2019 compared to 2018. Verified by Deloitte during our annual review of HSE data in January 2020. Emission Scope 1+2, 2018 = 15973 tons CO2. Emission Scope 1+2, 2019 = 15254 tons CO2. Decrease Scope 1+2, 2018-2019 = 719 tons CO2. Our annual target was 4% reduction. Reduction target achieved in 2019! #1: Verification statement from Deloitte. See page 1-3. Attachment: "CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf" #2: UN Global Compact 2019 Communication on Progress report. See page 20-21. Attachment: "COP_2019.pdf" 1, 2

[1]CDP Letter Lundbeck HSE Data Assurance Report 2019.pdf

[2]COP_2019.pdf

C11. Carbon pricing

C11.1

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

Yes

C11.1a

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

Denmark carbon tax

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, 2019

Period end date

December 31, 2019

% of total Scope 1 emissions covered by tax

42

Total cost of tax paid

5,056,000

Comment

In Denmark Lundbeck pay carbon emission tax from fuel combustion (gasoil, LPG and citygas), district heating as well as Public Service Obligation (PSO) on electricity to initiate more green energy from windmills. The PSO tax is paid through the electricity bill, and the tax money is used as a subsidy for renewable energy projects and research and development of renewable energy. All consumers in Denmark pay this PSO tax. The tax is incorporated in our billing invoice from the energy suppliers.
Between 2017-2020 the Danish PSO tax will be phased out.

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 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 monthly monitor national legislation and the Corporate HSE department is also required to monitor EU legislation.

CASE STUDY: In 2019 we initiated an agreement to use external consultants to monitor national and EU legislation for us, to make sure we are always in compliance. The consultants will provide an updated liste of current and new legislation on a quarterly basis, as well as comments/indications on where Lundbeck will have a potential gaps. The list provided is based on information found on different national and international web based sites/homepages providing data on new and upcoming legislation - to follow up and take a proactive approach. As soon as new legislation is identified, we decide how to implement and communicate about the legislation. As a part of the HSE system all HSE related legislation is audited as a minimum every 3 years.

Carbon tax is currently a part of the legislation in Denmark and France, but our activity in France is not covered by this tax (ref. according to criteria defined in Article 10a (16) (b) of Directive 2003/87 / C NACE code 2120 / Manufacture of pharmaceutical preparations)

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

Our indirect carbon price applies primarily to our engineering and maintenance departments, because these departments are driving all activities regarding maintenance, repairs, rebuilding and new building activities.

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

1,508

Variance of price(s) used

The price is changing every year depending on the contract with our supplier. In 2019 the sum provided was 300 DKK/MWh saved. This corresponds to 1508 DKK/ton CO2 saved. The price only applies to the Danish sites as it is only in Denmark it is possible to sell our energy reductions. We sold the energy savings for one projetct in 2019 - "Changing of air compressor for heat recovery and more efficient motor".

Type of internal carbon price

Internal trading
Implicit price

Impact & implication

Internal trading:
In Denmark energy suppliers have a mandatory required price on energy reductions related to scope 2. This means that it is possible to sell our energy reductions to our energy supplier. The actual price/kWh saved energy are fixed in a contract between the energy supplier and the company. 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.

Because we have worked with energy reductions for several years our future possibilities for implementing energy reducing activities are becoming more difficult. This combined with the development in the energy price towards lower price/kWh saved energy, means that the pricing system in the future will have less influence on the implementation of energy reducing activities. The arrangement is about to stop by 2020 and we anticipate this will be the end of this possibility with no more projects to sell.

Implicit price:
However we use CO2 as an integrated and mandatory factor to be considered in all our business cases when assessing new energy reducing projects. This formal approach of using CO2 as a decision making factor on same level as cost is new in 2019. This is an implicit price as the CO2 is accounted against benefitting our reduction target. Instead we are developing a business case template for energy projects where we among other things can score the CO2 reductions in a project. This can be considered an indirect carbon price. Currently CO2 reductions are rated higher than pay back times increasing the change for energy projects to be prefered over other projects.

C12. Engagement

C12.1

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

Yes, our suppliers
Yes, other partners in the value chain

C12.1a

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

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

1

% total procurement spend (direct and indirect)

9

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

4.8

Rationale for the coverage of your engagement

Lundbeck have build a strong relationship between our procurement and sustainability teams. By doing so we engage with selected suppliers on climate related issues.

Logistic suppliers (down stream transportation and distribution) for transportation of raw materials and finished products:
METHODE/CASE STUDY: Trucks with EURO Norm 5 (using less fuel and emitting less particles and CO2) or above are mandatory. In our written contract with the transportation company, 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.
These initiatives lower our own scope 3 emissions and raise the awareness on CO2 emission and climate change at the supplier. Lundbeck engage annualy with all our logistic suppliers (100%).
STRATEGY: Lundbeck use these data to track how we can preform better, criteria for selecting new suppliers and encurage the suppliers to adapt to more suatainable ways of transportation.

Business Travel of employees:
METHODE/CASE STUDY: Annual reporting and verification of business travel data by Deloitte. Lundbeck request this information dicretly by our travel agent. They provide emission data on short, medium and long haul as well as CO2 emission reporting practice. Lundbeck engage annualy with all our Business Travel suppliers (100%).
STRATEGY: Lundbeck encurage our employees to reduce travel and prefere online meetings and phone meetings as an first alternative. Only travel deemed necessary is encouraged.

Impact of engagement, including measures of success

Logistic suppliers (down stream transportation and distribution): Local target of 5% CO2 reduction in 2019 compared to 2018. Status: 4.7% reduction achieved.
Our target was not achieved in 2019 , due to more transportation of goods by air instead of by sea (we prefer sea, as this result in a lower CO2 emission and a lower cost). But due to risk of stock-out and urgent matters, we had to use air. The total transportation of goods (downstream) accounted for 2.0% of Lundbeck total scope
1+2+3 emissions in 2019.
MEASURE OF SUCCESS: Suppliers will report back upon our request. 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 of employees: Lundbeck increased our business travel in 2019 compared to 2018 by 25%. This is mainly due to changing of travel agent and the possibility to now include more data (China) in our inventory, as well as more travel to USA due to the aqusition of two new sites in 2019. The total Business Travel of employee accounted for 2.8% of Lundbeck total scope 1+2+3 emissions in 2019.
MEASURE OF SUCCESS: Travel agent will report back upon our request. 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

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

66

% total procurement spend (direct and indirect)

55

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

57

Rationale for the coverage of your engagement

Lundbeck act responsible in regards to climate change and we wish our suppliers to do so as well. We have climate targets and expect our suppliers to engage in such activities, by a proactive approach towards climate change. As part of our scope 3 target Lundbeck will engage with 2/3 of selected suppliers categories (based on spend and emission) before 2026 (base year is 2016) to motivate them to develop ambitious climate targets. The rationale for targetting 2/3 of our suppliers is due to requirements in the SBTi (Science Based Target initiative). In here chosing the engagement option parthway require involvment of 2/3 of the suppliers by number or 2/3 of supplier CO2 inventory. The supplier categories in question is: CRO, IT, consultants, raw- and packaging materials for production, company cars and transportation/logistics. METHODE/CASE STUDY: One example is a dedicated questionnaire on energy use and CO2 strategy sent for key suppliers on packaging materials as an engagement campaign. Other ways is to check the homepage of suppliers to assess if they have any information available online regarding climate initiatives or targets regarding climate change or if they disclose to CDP. I 2019 a few suppliers of packaging materials has been contacted directly at face to face meetings and follow up by e-mail to better evaluate the progress on climate target setting at site. Besides this Lundbeck Procurement Department send a questionaire to key suppliers. Procurement will add an environmental questions in a

mandatory questionnaire to key suppliers. If relevant for the purchasing process, the questions can also have specific climate/CO2 focus, as these two questions are incorporated:
1. Does your company have a CO2 emission target?
2. What is the CO2 emission target?
STRATEGY: The information on climate change will be used in a supplier awards scheme/performance criteria for selecting potential new suppliers, in our specific target setting, as well as scope 3 emission calculation (used for our work towards a science based target). In 2020 Lundbecks will submit a new Science Based Target (SBTi). The target will involve proactiv engagement with our key suppliers. Approval will be in late 2020.

Impact of engagement, including measures of success

Our current scope 3 target is an engagement target and not a part of our absolute emission targets. We will proactively push the development of climate targets at our suppliers by using requirements in sourcing process, questionnaires, audit and meetings.
MEASURE OF SUCCES: To have at least 2/3 of all suppliers in the selected categories to commit to climate target by 2026 (base year is 2016). This target will be evaluated in 2026 by making a survey using questionnaires, audits and meetings. Until then we will keep a register of suppliers who have climate target. The suppliers who do not have, we need to evaluate further, to update the register and be on track on our own target in the years to come. The impact of the climate related supplier engagement is expected to be a suppliers commitment to climate targets and ensure Lundbeck source from a greater number of suppliers having a proactive climate approach and targets regarding climate change.
STATUS: 19% of the suppliers in question have addapted a climate target.

Comment

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. More than 40 suppliers was reported to have climate targets.

Type of engagement

Compliance & onboarding

Details of engagement

Climate change is integrated into supplier evaluation processes

% of suppliers by number

30

% total procurement spend (direct and indirect)

3

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

Rationale for the coverage of your engagement

METHODE/CASE STUDY: Assist our GMO, API suppliers and chemical suppliers at on-site audits to set targets, risk asses impact and manage climate change actions. Lundbeck wants to act responsibly and wants to influence our suppliers to act accordingly on their climate performance. We have a firm Due Diligence Process of our partners to assess them before signing a contract. Our suppliers also have to sign and comply with our Code of Conduct stating "Take an active part in protecting the environment by reducing waste and minimising consumption of energy and other resources."

Lundbeck conduct on-site HSE audits (questionnaires and visits) on our chemical suppliers, API suppliers and GMO in high risk countries. Energy consumption, CO2 and climate change is always on the agenda as we try to improve the performance at the suppliers. If any unconformities' are reported, we visit (re-visit) the suppliers to raise the standard and level at site. If too low standard is considered the supplier is not accepted/approved by Lundbeck. This helps us keep close contact to all existing and new suppliers and secure a high level of HSE.

Impact of engagement, including measures of success

STRATEGY: Our target is to visit all new or low-performing (on HSE) chemical suppliers in developing/high risk countries at on-site audit every 3-4 years. We wish to put focus on energy consumption and climate change at our chemical suppliers by conducting HSE audits. All relevant suppliers receive a self-assessment questionnaire regarding HSE, issueed by our CSR department. By now most of our new and existing chemical suppliers in India, China, Russia, Singapore, South Africa, South Korea and Taiwan have been visited. Data on energy consumption is always a part of these audits. We always aim to get more suppliers to engage and accept HSE audit by Lundbeck.

Status: 14 chemical suppliers was visited at on site HSE audit by Lundbeck in 2019. Two suppliers was not approved and one was conditionally approved.

Comment

C12.1d

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

In 2019 Lundbeck joined the “Business Ambition for 1.5°C” initiative 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 UN Global Progress Report (Our CDP response is also available online at our homepage www.lundbeck.com). 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	Support	In November 2019, DK Prime Minister Mette Frederiksen unveiled 13 climate partnerships covering the main sectors across Danish industry, including sectors such as maritime, transportation,	Lundbeck support the messages defined in the partnership which includes: The partnership expects to reach, at least, a 70 % reduction in 2030 under current framework conditions.

for Life Science and Biotech to identify possibilities and barriers for reaching the 70% CO2 reduction target in 2030		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 i.e. to identify the contribution and ambition from each industry sector, as well as which framework conditions are needed to realize these. The baseline year is 1990, which is the baseline utilized by the U.N. and the Paris Agreement. Lundbecks Executive Vice President of Product Development & Supply (C-Suite Officer and member of EM) participated in this climate partnership. This included participation in: - 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.	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.

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 working group in the organization where all 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. During 2019 and beginning of 2020 Lundbeck participated in the update of this white paper. We participated in working meetings where the level of ambition and the phrasing were discussed. The biggest updates concerns clarification of the sectors support to the EU Green Deal and the importance of also addressing scope 3 in our climate actions.

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 Lundbecks HSE management system how internal and external communication is coordinated in the company. Lundbecks HSE management system is certified according to ISO 14001 and OHSAS 18001 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 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 can prepare press releases, corporate news at our homepage or Twitter announcements, but the content is always confirmed with 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. Lundbecks Corporate HSE department is responsible for managing Lundbecks Climate strategy and for the follow up on all Lundbecks climate initiatives and the long-term target. 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 always performed by our Executive Vice President of Product Development & Supply and clarified with the Corporate HSE department and the Corporate Communication department.
The internal communication concerning climate issues is coordinated and performed by 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

1

COP_2019_final.pdf

Page/Section reference

UN Global Compact Progress Report p. 5, 7, 15

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Public on www.lundbeck.com.

Publication

In mainstream reports

Status

Complete

Attach the document

1

Annual report 2019.pdf

Page/Section reference

Our Annual Report p. 24

Content elements

Strategy

Emission targets

Comment

Public on www.lundbeck.com.

Publication

In voluntary communications

Status

Complete

Attach the document

2

Twitter_1.5_CDP_Statement.docx

Press release_CDP.docx

Page/Section reference

Entire documents

Content elements

Governance

Strategy

Comment

1. One document with screen-dumps showing 3 Twitter publications concerning:
- Signing the Business Ambition for 1,5 degree Commitment (page 1)
- CDP result 2019 (page 1)
- Signing of statement "Urging governments around the world to align their COVID-19 economic aid and recovery efforts with ambitious climate targets. (page 2)

2. One document with our Press release about the CDP result 2019

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 billion in 2019.

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	17,036,000,000

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

0.3

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

0.3

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

8.5

Uncertainty (±%)

15

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 the multi-regional hybrid input-output database Exiobase. But some data we also get directly from our suppliers e.g. for downstream transportation. Exiobase is a global detailed multi-regional environmentally extended input output database. The Exiobase v3 database (http://www.exiobase.eu/) is the product of in total four large EU funded projects under the 6th and 7th framework programmes: FORWAST (http://forwast.brgm.fr/), EXIOPOL (http://www.feemproject. net/exiopol/), CREEA (http://www.creea.eu/) and DESIRE (http://fp7desire.eu/). Exiobase can be used for national level footprints (http://www.exiobase.eu/index.php/9-blog/27- creea-booklet) as well as for detailed corporate footprints, e.g. see http://lca-net.com/p/2343. Source for EXIO databasen: Merciai S, Schmidt J (2017). Methodology for the construction of global multi-regional hybrid supply and use tables for the EXIOBASE v3 database. Journal of Industrial Ecology, early on line view 12 December 2017. http://onlinelibrary.wiley.com/doi/10.1111/jiec.12713/full

Requesting member

CVS Health

Scope of emissions

Scope 3

Allocation level

Company wide

Allocation level detail

Emissions in metric tonnes of CO2e

435

Uncertainty (±%)

15

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 methan 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: 15 ton, Scope 2: 16 ton and Scope 3: 435 ton. Total of 466 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).

In our CDP investor response 2020 all data are public available. In section 6 you find intencity 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 multi regionalhybrid input-output database Exiobase, to calculate the emission based on economic spend data.
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.

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.

We expect to increase the dialogue about climate changes and product specific emissions in the future. This will make our scope 3 data more precise and it will increase our possibilities for allocating CO2 emissions for products produced solely in our scope 3. In 2020 we will mKW new Scope 3 inventory calcultion and a SBT.

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 2019.

SC2.1

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

Requesting member

Johnson & Johnson

Group type of project

Relationship sustainability assessment

Type of project

Assessing products or services life cycle footprint to identify efficiencies

Emissions targeted

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

Estimated timeframe for carbon reductions to be realized

3-5 years

Estimated lifetime CO2e savings

10

Estimated payback

3-5 years

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.

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

Other, please specify

5

Estimated lifetime CO2e savings

5

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.

SC2.2

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

No

SC3.1

(SC3.1) Do you want to enroll in the 2020-2021 CDP Action Exchange initiative?

No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2019-2020 Action Exchange initiative?

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.

0.19

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

10.1

±% change from previous figure supplied

96

Date of previous figure supplied

May 19, 2020

Explanation of change

Total emissions in kg CO2e per unit in 2019 was 10.10. This is an increase ff 96% compared to 2018. The sales numbers has decreased very much compared to 2018, as Lexapro is no longer sourced. Decrease in SKU of factor 29. The SKU now sourced is a different size and number of tablets, hence the change in emission of 96%.

Methods used to estimate lifecycle emissions

GHG Protocol Product Accounting & Reporting Standard

Name of good/ service

Pharmaceuticals

Description of good/ service

Anti depressive medicine for CVS

Type of product

Final

SKU (Stock Keeping Unit)

1

Total emissions in kg CO2e per unit

8.14

±% change from previous figure supplied

-0.2

Date of previous figure supplied

May 19, 2020

Explanation of change

Total emissions in kg CO2e per unit in 2019 was 7.98. This is an increase of 2.0% compared to 2018. Change due to different mix in units bought and less sales to CVS (16.7%).

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

10.1

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. The only topics we have not included is the transport, as our customers do this part themselves. CO2 emissions from the incineration of the empty packaging and unused medicine is also not included.

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

8.14

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. The only topics we have not included is the transport, as our customers do this part themselves. CO2 emissions from the incineration of the empty packaging and unused medicine is also not included.
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.

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 2019 compared to 2018 was 4.5% (719 tons). The part of the CO2 reduction for J&J and CVS corresponds to 1.5 tonnes (0.19% of Lundbeck total Scope 1,2,3 emissions).		0.03

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, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms