Climate Plan 2030 for SDU

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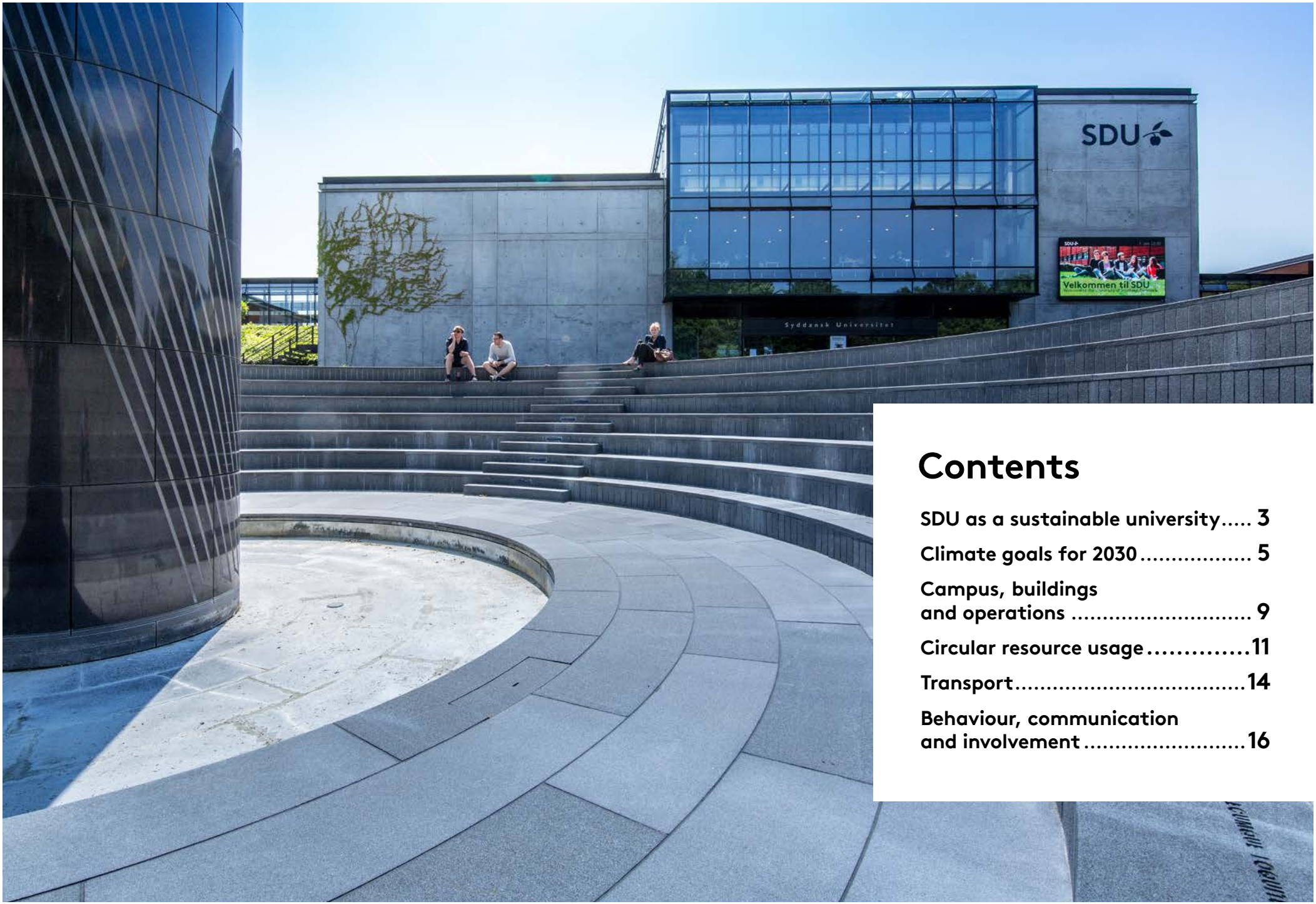
SDU



Contents

SDU as a sustainable university

As a university, SDU contributes with knowledge and competences to solving the major societal challenges through research and education. In June 2019, SDU's Executive Board decided to make the UN's 17 Sustainable Development Goals the focal point for the University's continued development. Today, sustainability is therefore part of the University's research, innovation, education programmes and daily operation. Within the climate field, the University's researchers contribute to the development of climate-friendly fuels, intelligent energy management systems, sustainable product development, methods for life cycle analyses etc.

Through research and education, we are thus making important contributions to the Paris Agreement's goal of reducing greenhouse gas emissions in order to keep global temperature rise below 2 degrees Celsius, as well as striving to keep it below 1.5 degrees Celsius in order to avoid the worst effects of climate change. With this climate plan, we focus specifically on SDU's own climate footprint and explain how we will work towards a significant reduction in the University's greenhouse gas emissions by 2030. The climate plan contains the University's overall goal for reducing greenhouse gas emissions, as well as goals, sub-goals and efforts in four areas:

- → Campus, buildings and operations
- → Circular resource usage
- → Transport
- → Behaviour, communication and involvement

The implementation of the climate plan in these four areas will be based on three underlying principles:

- → The efforts must be research-based and the work will involve research environments at the University.
- → Efforts aimed at promoting climate-friendly behaviour must be based on involvement and recognition rather than negative sanctions and make it easy to make climate-friendly choices.
- → The University's facilities, outdoor areas and (consumption) data are made available to researchers, lecturers and students for the development and testing of sustainable solutions.

The climate plan has been made based on contributions from employees and students through workshops on all campuses of the University.

Special thanks are due to the researchers at the faculties, experts from the central administration and students from the Green Student Movement, who, in an expert group, have made their special insights on climate change available for the preparation of the climate plan.

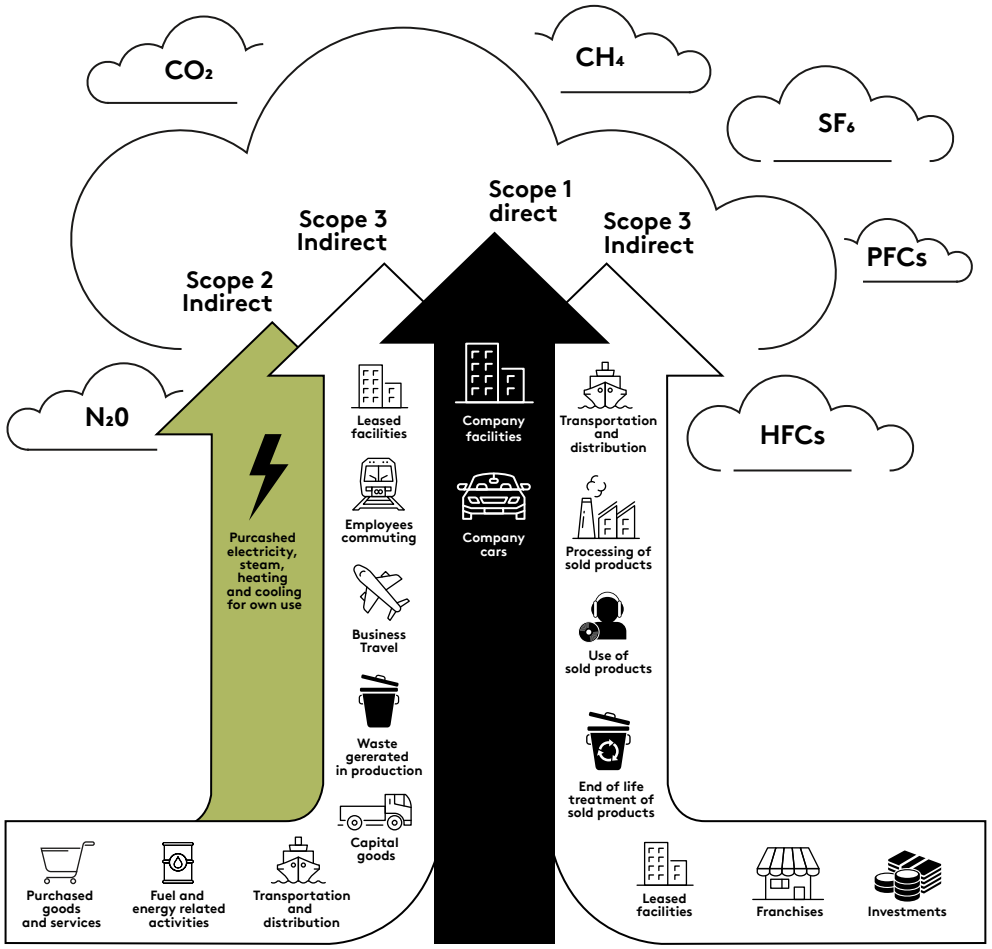
Climate goals for 2030

As a university, we play an important role in relation to the climate challenges. We create new knowledge through research and disseminate this knowledge through education and in collaboration with external parties. However, as a place of study for 27,000 students and a workplace for 4,000 employees (full-time equivalents) spread over six campuses, it is also important for us to reduce our own greenhouse gas emissions in line with what research deems necessary. SDU has therefore set a goal of reducing the University's greenhouse gas emissions by 2030 by at least 57% compared to 2018. In 2018, SDU's emissions totalled 11,373 tonnes of CO_2 equivalents. This number should be down to 4,890 CO_2 equivalents by 2030. The goal of a reduction of 57% compared to 2018 corresponds to a reduction of 70% compared to 1990. With this goal, SDU meets the Danish government's goal of a 70% reduction in CO_2 equivalents in 2030 compared to 1990.

What does the climate goal contain?

The goal of a 57% reduction in 2030 compared to 2018 applies to the emissions that we are positive we can calculate and quantify, and they include those that fall under scope 1 and 2 as well as parts of scope 3 in the GHG protocol. Scope 1 concerns direct emissions from the University by incineration of e.g. oil, gas, petrol and diesel, while scope 2 concerns indirect emissions caused by electricity and heat purchased and consumed by the University. Scopes 1 and 2 are fully included in the climate goal. Scope 3 covers all other

Figure 1: Scopes in the GHG Protocol



SDU-related emissions that come from e.g. air travels, construction, procurement of goods and services, waste and water consumption. Work-related air travels, rail travels and taxi services are part of the 57% reduction target.

Where do we start?

As mentioned above, SDU's emissions in 2018 totalled 11,373 tonnes of CO_2equivalents. As the table below shows, these emissions amounted to 377 tonnes of CO_2 equivalents in scope 1, 6,931 tonnes of CO_2 equivalents in scope 2 and 4,065 tonnes of CO_2 equivalents in scope 3. The table also shows that air travels and energy consumption associated with university buildings constitute the largest sources of greenhouse gas emissions in the current accounts.

Table: Climate account for SDU in 2018 (measured in tonnes of CO_2 equivalents)

	Scope 1	Scope 2	Scope 3
Own heat production	14	-	-
Driving service vehicles	125	-	-
Driving employees' vehicles	236	-	-
Fossil fuels	2	-	-
Electricity	-	4,472	-
Heat	-	2,459	-
Air travels	-	-	3,912
Rail travels	-	-	144
Taxi trips	-	-	9
In total per scope	377	6,931	4,065
Total emissions			**11,373**

What does the climate plan contain?

The climate plan contains actions aimed at the emissions that we can currently calculate and quantify, and will thus contribute to the achievement of the climate goal. However, the climate plan also contains efforts against emissions that we cannot yet calculate and quantify, but where research shows that there is a climate footprint. As the University gains better insight into the climate footprint from various sources in scope 3, there may be a need to also define goals and efforts for other areas in scope 3.

The climate plan also contains initiatives aimed at enabling employees and students to contribute in different ways to reduce the University's climate footprint. This applies, among other things, to developing and testing new solutions to reduce the climate footprint through research, projects and theses etc.

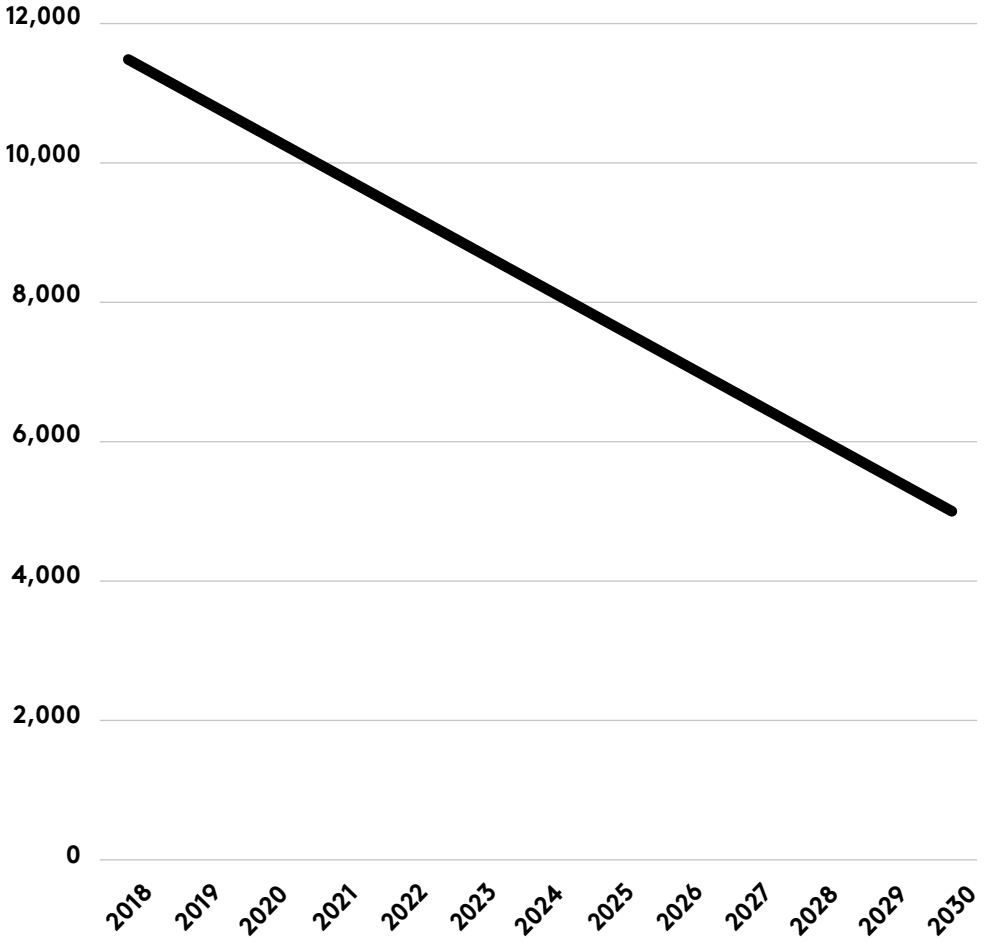
Follow-up on the climate goal and plan

This version of the climate plan contains the efforts that will initially be prioritised in a three-year implementation wave running from 2022 to 2024. The second and third implementation waves run from 2025 to 2027 and 2028 to 2030, respectively.

Every year, a follow-up of the work on the plan will be carried out in the form of a climate account and an assessment of ongoing efforts.

The figure on the right shows a simplified linear projection of the development of the University's greenhouse gas emissions towards the target of a 57% reduction in emissions by 2030 compared to 2018. Thus, the figure does not take into account the behaviour of employees and students, technological developments, political

Figure 2: SDU's climate plan aims to reduce the University's emissions of CO_2 equivalents from 11,000 to 5,000 tonnes by 2030



efforts, the general transformation of the electricity and district heating sectors, the weather and several other factors that play a role in the University's climate footprint.

The ongoing follow-up of goals and efforts must make it possible to take into account potential technological advances in, for example, transport and energy production to changing social norms, behaviour and consumer habits.

The suggestions made by employees and students in the preparation of this climate plan, which are not prioritised in the first implementation wave, will be included as options for action for further work.

As part of the work on the follow-up and ongoing review of the climate plan, a climate council is appointed to advise the University's management on the climate work at SDU.

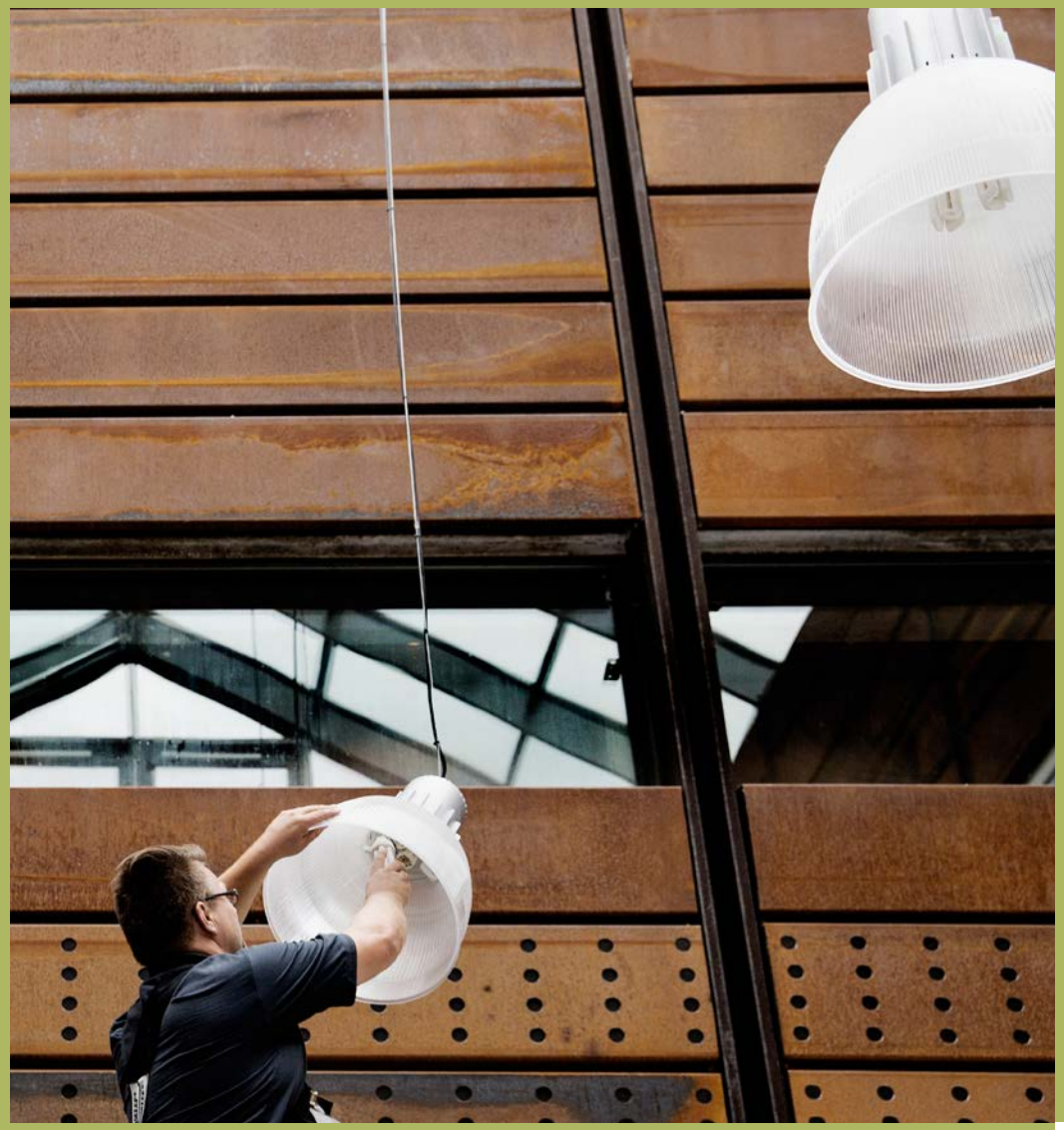
The Council consists of researchers, experts and students from SDU with special insight into climate change. The University Director is the chair of the Climate Council.

A) Campus, buildings and operations

In recent years, SDU has implemented initiatives in the form of energy optimisation of ventilation and heating systems, installation of solar cells on flat roofs, replacement of lighting systems, etc., which together have contributed to reducing SDU's climate footprint in this area.

Additionally, SDU joined the DGNB certification in 2020. DGNB is a German certification scheme which creates a common starting point for measuring and assessing sustainable construction. Although the University has come a long way, considerable efforts are still needed in this area. Buildings and their operation and maintenance form a very important part of SDU's overall climate footprint

because of the energy consumption (scope 2) and the production and use of building materials, facilities and services (scope 3).



Goals for 2030	SDU will reduce its greenhouse gas emissions in connection with new construction and renovation as well as the operation and use of buildings and outdoor areas.				
Sub-goals for 2030	Reduce energy consumption in university buildings.	Increase the share of renewable energy in the university's energy consumption.	Increase biodiversity and plants on the University's outdoor areas.	Reduce the climate and environmental footprint from university laboratories.	Reduce the University's digital climate footprint.
	A1 Development and implementation of campus-based energy optimisation strategies: → Mapping buildings on SDU's campuses in relation to the quality of existing intelligent energy management systems, the types of activities, equipment in the buildings etc. → Analysis of patterns in relation to energy consumption and energy sources based on energy data as well as through interviews, questionnaires etc. among employees. → Review of existing state-of-the-art energy optimisation strategies. → Definition of concrete energy optimisation efforts, goals and criteria through employee involvement. → Competence development of employees and continuous follow-up of goals and efforts. A2 Extend My Green Lab Certification of laboratories to several laboratories at the University. A3 Uncover the University's energy consumption on servers, cloud solutions, etc. in order to reduce the University's digital climate footprint. A4 Strengthened flexible use of existing office space and exploring the possibility of using existing basement rooms (at campus Odense) in order to reduce the need for new and additional buildings. A5 Mapping buildings in operation to examine in which sustainability aspects the buildings and building operations are doing well, but also to make improvement opportunities visible. A6 Development and implementation of a plan to increase biodiversity and plant rates on the University's outdoor areas. A7 Exploring the possibility of increased interaction with district heating companies in relation to capturing and storing surplus heat possibly in connection with the installation of heat pumps. A8 Exploring the possibility of utilising the University's outdoor areas and parking spaces for solar cell panels.				

B) Circular resource consumption

All waste production and incineration is, in principle, a waste of the planet's resources, putting a strain on nature, the environment and climate. SDU will therefore continue working to reduce the amount of waste and increase the proportion of recycled waste using our resources wiser, smarter and more responsibly overall. It also means requirements for procurement with a stronger focus on the design phase of products and packaging so that they can be recycled in high quality.

In 2020, SDU adopted a completely new sustainable procurement policy and strategy. The new procurement strategy is backed by a completely new procurement system: TrueTrade. SDU has chosen TrueTrade because it masters all aspects of digital procurement.

SDU is the first Danish university to join The Partnership for Public Green Procurement, which will ensure sustainability in our procurements in the future.

Through this work, SDU will make a difference and contribute to ensuring a sustainable transformation of the entire university. We must consume wisely. This means minimal, circular and sustainable. With this SDU will actively take social responsibility through the demands we make on our suppliers.

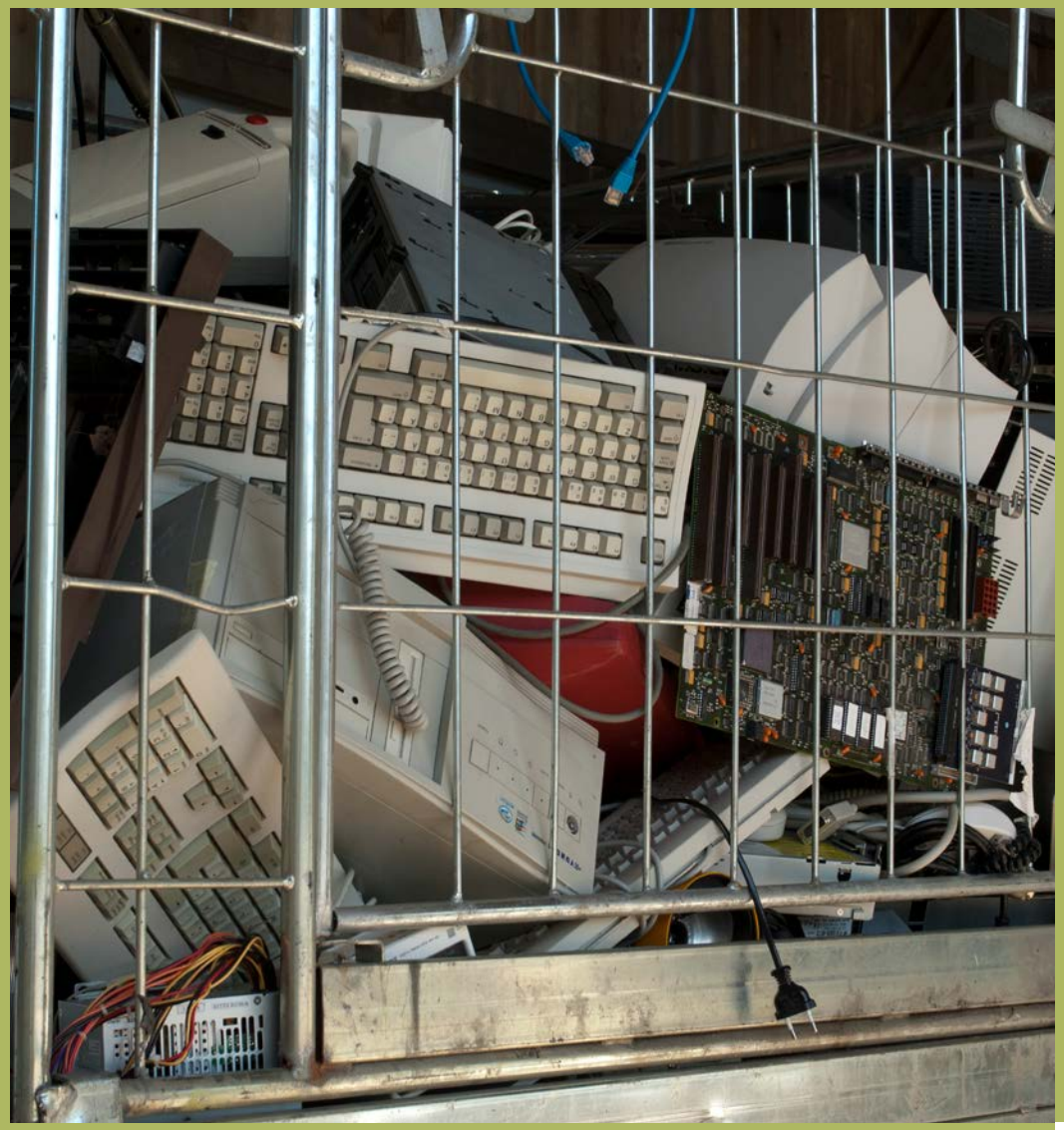
The requirement for compliance with international fundamental rights concerning human and labour rights, the environment, production methods and more.

In 2020, SDU put its canteen operations out to tender with a re-

quirement that the supplier reports on its climate footprint and plan for reducing this, provide nutritious and plant-based meals every day of the week, combat food waste and keep the use of disposable packaging to an absolute minimum, etc.

Furthermore, in its investment policy, SDU emphasises that the University's asset managers are signatories of UN PRI with a focus on social and environmental sustainability and responsibility governance.

Technical Services at SDU currently handles 32 waste fractions 'behind the scene', which employees, students and guests at SDU do not necessarily notice. Technical Services handles e.g. food waste from SDU's canteens; construction projects sort different building materials and SDU IT sorts IT scrap, cables etc.



Goals for 2030	SDU wants to reduce greenhouse gas emissions by consuming less and using our resources wiser, smarter and more responsibly.			
Sub-goals for 2030	Reduce the university's procurement volume.	Increase the proportion of recycled waste from the University.	Reduce the amount of residual waste through increased source sorting among users of the University.	Use our resources wiser, smarter and more responsibly through increased focus on circular economy.
Efforts 2022 - 2024	B1 Analysis of the entire procurement area in order to identify potentials for reducing procurement volume and subsequently drawing up a plan for implementation and realisation. B2 Identification of real needs for delivery of goods to the university and internal mail workflows to reduce the number of small orders and optimise internal logistics. B3 Dissemination of knowledge and use of SDU's commodity exchange in procurement systems. B4 Lifetime extension and circular economy required in future tenders in all hardware areas (e.g. smartphones, tablets, AV equipment etc.). B5 Development and implementation of a comprehensive resource and waste plan for the university (Circular SDU): → Efforts in terms of waste prevention and direct recycling, including requirements for suppliers. → Efforts to prepare for recycling and reuse. → Efforts to promote innovation in the treatment of recyclable resources and circular economy in procurement. B6 Rolling out source sorting among university users on all university campuses, making it easy for students, staff and guests to contribute to increased waste sorting. B7 Exploring the possibility of cooperation with waste management companies in relation to automation and robotisation of waste sorting and recycling.			

C) Transport

Transport, especially air travels, account for a significant part of SDU's greenhouse gas emissions. In addition to work-related trips on planes, trains, in own vehicles or one of SDU's service vehicles, transport also includes commuting to and from work.

Commuting to and from work is part of Scope 3. At present, it has not been possible to calculate and quantify the commuting of employees. We are working on this in collaboration with the other Danish universities. However, as mentioned, work will be done to promote climate-friendly transport for both work-related trips and commuting.

SDU has decided to phase out the University's diesel and petrol-powered vehicles in favour of vehicles using climate-friendly fuels by the end of 2023 and has carried out experiments to promote carpooling, public transport and bicycle as a means of transport.

Going forward, our task is to support employees in choosing climate-friendly transport and virtual meetings and conferences, rather than (especially) air travels, keeping in mind that international cooperation is an essential part of the research work. At the same time, it is also important to take into account the work-life balance of employees.

Goals for 2030	SDU will reduce its greenhouse gas emissions in connection with work-related trips and daily transport to and from the university.		
Sub-goals for 2030	Reduce the climate footprint of air travels.	Increase the proportion of employees and students using climate-friendly transport to and from university campuses.	Encourage employees and students to have digital meetings.
Efforts 2022 - 2024	C1 Development and implementation of updated travel policy in relation to air travels, public transport, driving your own car and the University's overall car fleet with a clear climate focus and through employee involvement. C2 Continuous sharing of experience and knowledge in relation to the use of digital meeting forms, including identifying the need for more IT equipment to support digital or hybrid forms of meeting. C3 Installation of publicly available charging points on all university campuses. C4 Campaign to promote carpooling, public transport and bicycle as a means of transport among employees and students.		

D) Behaviour, communication and involvement

As students and staff, we form the University. In order for us to succeed in fulfilling the ambition to reduce SDU's climate footprint, we need to collaborate on climate-friendly initiatives and behaviour in our everyday lives at SDU's locations.

The sustainability work carried out so far at SDU has been based on a high degree of involvement of employees and students in the development of solutions and prioritisation of initiatives. This approach will continue in the implementation of the climate plan. It is important that we as employees and students are not merely spectators, but have a real opportunity to contribute.

In relation to students, SDU has established a sustainability academy that aims to strengthen students' competences in terms of challenges in sustainability. And as a student at SDU, you still have the opportunity to apply for funds for student-initiated sustainability initiatives.

At the same time, more employees and students demand even more visibility concerning SDU's sustainability work. And several of us may lack knowledge about the great efforts and initiatives that are already being practiced at SDU's locations today.

It is important that employees and students are provided with tools for knowledge sharing, co-creation and dialogue.

Goals for 2030	SDU will make it easier for university users to make climate-friendly choices on university campuses and involve employees and students in the work to reduce the University's greenhouse gas emissions.		
Sub-goals for 2030	Enhanced sharing of knowledge and experience on joint and local sustainable initiatives.	Strengthened use of university campuses as 'living labs' for the development and testing of sustainable solutions.	Strengthened competence development for employees and students in relation to making the University more sustainable and climate-friendly.
Efforts 2022 - 2024	D1 Establishment of climate councils with researchers, experts and students from SDU. D2 Publication of monthly internal newsletters focusing on joint and local sustainability initiatives. D3 Development and implementation of plan for the use of university facilities, outdoor areas and (consumption) data for the development and testing of sustainable solutions. D4 Training and networking for climate ambassadors among employees. D5 Developing capabilities to work more data-driven with the actions in the climate plan.		

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