Stockholm University

Climate Roadmap 2040

REVISION FOR THE PERIOD 2025–2026

Contents

Preface

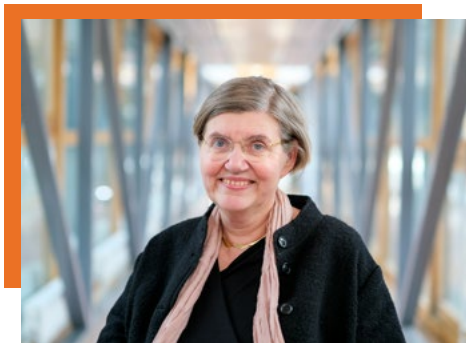
The world today faces enormous challenges in tackling greenhouse gas emissions and adapting to a changing climate in line with the recommendations put forward by the UN's Intergovernmental Panel on Climate Change (IPCC). Domestically as well as within the EU and internationally, new agreements are being made, and new laws are taking shape to reduce carbon dioxide emissions to acceptable levels. At the same time, new technologies are being developed to cut emissions and capture the carbon dioxide already present in the atmosphere. However, the latest IPCC reports show that the combined international and national efforts remain insufficient to achieve the Paris Agreement's goal of limiting temperature rise to 1.5°C. The climate situation is urgent – the gap to align with the 1.5-degree target is widening, emissions are increasing globally, and drastic reductions in emissions are required. Legislation and technological shifts alone will not be enough – changes in behavioural patterns across society, among individuals, households, authorities, and businesses, are also necessary.

Universities have a special role to play in addressing society's climate challenges, primarily through their core missions of generating new knowledge via research and disseminating knowledge through higher education and collaboration with society. It is also crucial for the universities' credibility that they reduce their own carbon dioxide emissions in line with what research shows is necessary. This presents significant challenges and affects all aspects of university operations. Swedish universities and higher education institutions have demonstrated strong commitments to contributing – both internally and externally – to Sweden's national climate goal of achieving carbon neutrality by 2045.

To accelerate its internal climate efforts, Stockholm University signed the UN's Climate Emergency Letter for Higher Education in June 2019, thereby committing itself to achieving carbon neutrality by 2040. The current Climate Action Plan for the period 2020–2040 is based on the sustainability goals of Agenda 2030, while also taking a broader societal perspective that includes policies and targets aligned with, for example, Sweden's Climate Policy Framework, the European Green Deal, and the EU Climate Law.

In recent years, Stockholm University has successfully reduced its carbon dioxide emissions. While some of the reasons for this can be traced to the effects of the pandemic, substantial rent increases, and a global economic crisis, I am also convinced that the Climate Action Plan has played a crucial role in enabling emission reductions at all levels of the University's operations. This has been achieved not only through systematic and deliberate prioritisation but also through broad and strong engagement among staff across the University. My hope is that the Climate Action Plan will continue to serve as both a compass and a clear framework for the level of ambition and pace of our efforts. This progress depends on the continued strong engagement of the entire University and reflects the University's strong profile in these matters.

Last but not least, I would like to extend special thanks to the Environmental Council, led by Magnus Breitholtz, which has been responsible for developing the Climate Action Plan. I also want to acknowledge the support of the reference group that assisted in this work – Lennart Bergström, Karin Bäckstrand, Line Gordon, and Alasdair Skelton – as well as Nathaniel Morris and Lena Söderlundh from the central environmental function along with environmental coordinator Paul Glantz. I sincerely hope that managers, staff, and students will continue to work together to ensure that Stockholm University remains a leader in the necessary transition towards a more sustainable and resource-efficient society.



Astrid Söderbergh Widding
President of Stockholm University

Summary of Proposed Measures for the Period 2025–2026

Stockholm University

Management of the University's Emissions

Buildings and Energy

Measures

- Ensure that a sustainability is incorporated into the premises optimisation projects.
- Work to reduce emissions and increase energy efficiency within the University's premises, in collaboration with property owners.
- Investigate the possibility of using the same system for calculating emissions from buildings and energy as Akademiska Hus.
- Improve the climate tool's calculations for existing properties by creating access to detailed and relevant data from property owners.

Negative emissions

Measures

- Maintain a continuous dialogue with Akademiska Hus and Stockholm Exergi about future collaboration on district heating that generates negative emissions.

Procurement of Goods and Services

Target

Stockholm University shall achieve a 30% reduction in emissions by 2026, compared to the reference year 2019.

Measures

- Investigate which product groups can have an extended lifespan through increased usage or reuse, and identify the requirements and criteria that encourage longer lifespan.
- Explore the possibility of extending the lifespan of computers and other hardware.
- Establish a system for the reuse of furniture, inventory, and laboratory equipment.
- Update the University's Green IT Policy, both generally and by including how the impact of data centres and AI can be managed sustainably.
- Improve the climate tool's calculations for cost-intensive services, where possible.

Business Travel

Target

Stockholm University shall achieve a 30% reduction in emissions by 2026, compared to the reference year 2019.

Measures

- Ensure that the Meetings and Travel Policy is being followed.
- Improve and simplify the use of land-based means of transport, such as trains, instead of flights for business travel within Sweden and Europe, in continuous dialogue with the contracted travel agency.
- Investigate the possibility of hiring a travel agency specialised in train travel, particularly international train travel.
- Explore the possibility of introducing internal carbon fees to subsidise business travel with significantly lower carbon footprints than air travel.

Stockholm University

The University's contribution to a sustainable and resource-efficient society

Research

- Actively influence research policy, both in Sweden and at the EU level, to more clearly integrate the humanities, social sciences, and interdisciplinary research within the EU's framework programme Horizon Europe.
- Ensure that necessary internal resources are available for effective collaboration with Stockholm City, Region Stockholm, and other relevant external stakeholders.

Education

- Conduct an inventory of the course and programme offerings within the sustainability area and begin work to create new courses and programmes where needed.
- Investigate the possibility of developing and implementing local graduation goals related to sustainability within more subject areas.
- Identify and reduce administrative barriers for developing new interdisciplinary and faculty-wide education programmes.

Students and Student Influence

- Increase awareness of sustainability and promote courses and programmes that address sustainability on the University's education portal.

Academic Collaborations

- Provide necessary resources to enable collaborations with other universities to drive national and international research and joint projects within the climate and sustainability areas.

Collaboration

- Map and make visible the University's existing arenas for collaboration on sustainability.
- Ensure that sustainability and climate are central to the University's collaboration efforts.
- Clarify the strength of Stockholm Trio's sustainability work and collaboration with society by leveraging the knowledge and resources of the three universities.

1. Purpose and structure of the Climate Roadmap

Stockholm University

Purpose and structure of the Climate Roadmap

The overall aim of the Climate Action Roadmap is to chart the way forward for Stockholm University's climate efforts for the period of 2025–2026. The roadmap describes how the University aims to achieve carbon neutrality by 2040 and presents proposals for actions that, through research, education, and collaboration, can contribute to the development of a more sustainable and resource-efficient society.

- **Section Two** outlines the policies and agreements that guide Stockholm University's climate efforts.
- **Section Three** explains how the University measures greenhouse gas emissions and provides an overview of emissions within different categories.
- **Section Four** presents the University's priority emission areas as well as targets and proposed measures to reduce emissions in these areas for the period 2025–2026.
- **Section Five** describes the University's contributions to a sustainable and resource-efficient society through research, education, and collaboration with the broader community. It also proposes measures to enhance the effectiveness of these contributions for the period 2025–2026.
- **Section Six** details the division of responsibilities and the follow-up process for the Climate Action Plan.

2. Background

2.1. Global commitments and perspectives

In September 2015, the world's heads of state and government adopted a new development agenda with global goals for sustainable development. The so-called Agenda 2030 consists of 17 global goals, aimed at eradicating poverty, halting climate change, promoting education, and creating peaceful and secure societies. In December of the same year, the Paris Agreement was signed – an international agreement under the United Nations – aiming to maintain the global temperature increase well below 2 degrees, and preferably under 1.5 degrees. According to the Paris Agreement, countries' commitments to reducing national emissions must be progressively strengthened and reviewed every five years through what is known as the Global Stocktake.

At the first Global Stocktake at the UN climate conference COP28 in Dubai at the end of 2023, nearly 200 member countries reached an agreement. The member states outlined how the global community should enhance efforts to reduce emissions and transition away from fossil fuels, as well as how to improve climate adaptation capabilities and realign financial flows. This clearly signals the beginning of the end of the fossil fuel era. Based on the first Global Stocktake, countries are expected to present new national plans to reduce emissions ahead of COP30.

In recent years, the UN's Intergovernmental Panel on Climate Change (IPCC) has presented the global climate situation in various parts of its Sixth Assessment Report (AR6). The first report, published in 2021 and focusing on the scientific basis for climate change, shows that the global average temperature has risen by 1.1 degrees since the beginning of the industrial era up to 2020. It also reveals that warming is happening much faster over land than over sea – 1.6 degrees compared to 0.9 degrees. The third report, published in 2022 and focused on measures to mitigate climate change, delivers a clear message: the climate situation is critical, the gap to the 1.5-degree target is widening, and despite the need for drastic emission reductions, global emissions continue to rise. According to the EU's climate service Copernicus, not only has the warming continued, but global heat records have been broken for thirteen consecutive months, from June 2023 to June 2024. June 2024 was the warmest ever recorded since measurements began in the 1850s (Figure 1).

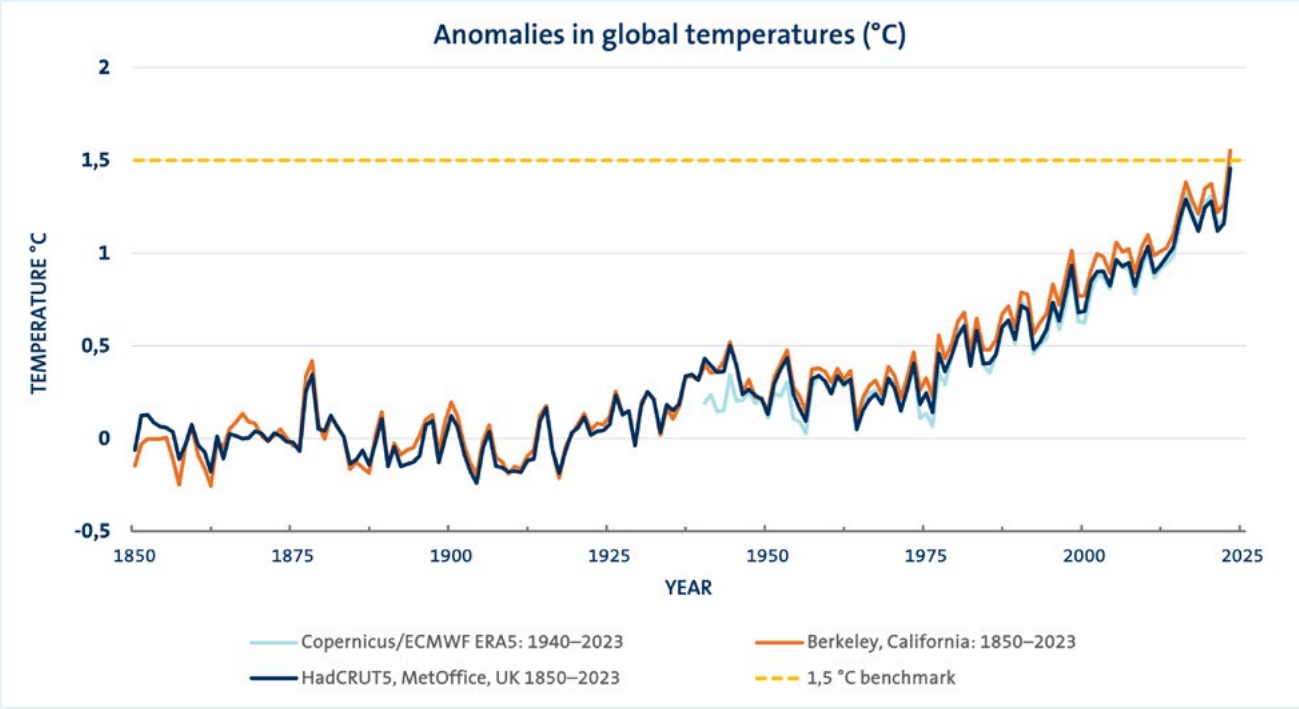


Figure 1. Deviations in global annual mean temperature from Copernicus ERA5, Berkeley, and HadCRUT5, with all three data series showing that warming up to and including 2023 is approaching 1.5 degrees

2.2. The EU's Climate Policy

At the end of 2019, the European Commission launched and adopted the European Green Deal, a roadmap for climate neutrality and a new growth strategy. Its aim is to transform the EU into a fair and prosperous society with improved quality of life for current and future generations. This transformation is intended to result in a modern, resource-efficient, and competitive economy by 2050, in which greenhouse gas emissions are net zero and economic growth is decoupled from resource use. The Green Deal confirms the Commission's ambition for Europe to become the first climate-neutral continent by no later than 2050.

In April 2021, EU Member States adopted a new European Climate Law. This means that the EU's current political framework is complemented by a long-term action plan, and that the goal of a climate-neutral Europe by 2050 is enshrined in EU legislation. As part of the Green Deal, the EU adopted the Fit for 55 legislative package in June 2023. This consists of measures and laws designed to achieve the EU's target of reducing greenhouse gas emissions by 55 percent by 2030, compared with 1990 levels. The package, which underpins the EU's contribution to the Paris Agreement, includes all aspects of the Green Deal, including the EU's new strategy for climate adaptation. In June 2024, the EU adopted the Nature Restoration Law, and a revision of the 2040 targets is currently underway.

Within the EU, there is currently an Emissions Trading System (ETS), which covers around 750 Swedish installations in industry and energy production and 13,000 installations across the EU. The goal of the ETS is to reduce emissions of carbon dioxide and other greenhouse gases, which is crucial for the EU to meet its own climate targets and fulfil its international commitments under the Paris Agreement. As part of the Fit for 55 package, a revision of parts of the EU's climate legislation is proposed, including the ETS. Previously, the ETS covered roughly 40% of the EU's total emissions. The revised version aims to increase that share by incorporating more sectors such as shipping, and by introducing a new ETS for transport and buildings from 2026. The Commission also proposes a gradual phase-out of the free allocation of emission allowances in aviation starting in 2025, with full auctioning to be implemented in 2027.

2.3. Sweden's Climate Policy

Sweden is an international pioneer in the environmental field and has a long history of setting and working towards ambitious environmental goals. The current Swedish system of environmental objectives consists of one generational goal, 16 environmental quality objectives, and a number of interim targets in areas such as waste, biodiversity, hazardous substances, sustainable urban development, air pollution, and climate.

In 2017, Sweden also adopted a climate policy framework which came into force on 1 January 2018. It consists of a Climate Act, a set of climate targets, and a Climate Policy Council. The overarching long-term goal is for Sweden to have net zero greenhouse gas emissions by 2045 — this applies to territorial emissions within the country's borders. To reach net zero, Sweden may take into account complementary measures. However, direct emissions from activities within Swedish territory must be at least 85% lower than in 1990. In addition, emissions from the transport sector must be reduced by 70% by 2030, compared with the reference year 2010. Following the adoption of the Fit for 55 package by the EU in 2023, Sweden is now focusing on reducing greenhouse gas emissions by 55% by 2030.

In terms of emissions within its own borders, Sweden must achieve net zero greenhouse gas emissions by no later than 2045, and thereafter attain negative emissions. The Climate Policy Council has, in seven annual reports, reviewed the government's climate policies, including two four-year climate action plans (2019–2023, 2023–2027). Each year, the government has been criticised for the slow pace of transition, not least in the most recent report published in March 2024. This critical view is shared by the Swedish Fiscal Policy Council, which presented its Swedish Fiscal Policy 2024 report in May 2024. In addition to these advisory bodies, both the Swedish Energy Agency and the Swedish Environmental Protection Agency have concluded that the climate targets will not be met under current policies.

2.4. Climate Work at Swedish Universities

To achieve the Swedish goal of carbon neutrality by 2045, a transformation of the entire society is required, along with many technological leaps that must be implemented in a short time. In addition, behavioural changes are needed for more sustainable consumption, from the individual level up to the societal level. A significant part of the work lies with the business sector. Through the government initiative Fossil-free Sweden, several industry sectors have developed a total of 22 roadmaps for how they will become fossil-free. Knowledge about climate, environment, and sustainability is crucial for us to reach the overarching goal of climate neutrality across all industries. Universities play a central role in knowledge provision and skills development.

In addition to contributing to climate work through research and education, most Swedish universities and colleges have, since 2021, been part of the Universities' Climate Network (formerly the Climate Framework)

The universities in the climate network commit to:

- continuing to contribute to society's achievement of set goals through education, research, and collaboration,
- reducing climate impact in line with society's commitments as expressed in national and international agreements,
- setting ambitious goals for climate work and allocating resources to achieve these goals and conduct follow-ups, and
- clearly communicating climate efforts to inspire and disseminate knowledge to citizens and other stakeholders.

Within the network, there are currently focus groups working to develop guidelines and recommendations for how Swedish universities should reduce their greenhouse gas emissions in various areas, such as buildings, procurement of goods and services, and business travel.

2.5. Stockholm University's Climate Work

In June 2019, Stockholm University, as the first Swedish higher education institution, signed the UN agreement on global sustainability goals for higher education (Climate Emergency Letter), committing to the following three sustainability goals:

1. Achieve carbon neutrality by 2040
2. Mobilise more resources for solution-oriented climate research and competence development
3. Develop interdisciplinary environmental and sustainability education.

As part of this ambition, Stockholm University adopted a climate action plan in December 2020. The three sustainability goals outlined above form the overarching vision for the University's climate efforts within both core operations and operational support over the next 15 years. However, the current climate action plan has a broader goal and also takes into account statements and goal formulations in, for example, the Swedish climate policy framework, the universities' climate framework, the EU climate law, and the European Green Deal. The purpose is to clarify the University's important role in the work for positive societal development and long-term sustainable development.

In the current strategies for Stockholm University 2023–2026, four strategic areas have been formulated for the institution's activities. One of these is "A societal force contributing to democracy and sustainable development." According to this strategic area, the University's activities should be characterised by a clear and developed sustainability profile that contributes to sustainable development, primarily through research and education, but also by reducing the environmental and climate footprint of its own operations.

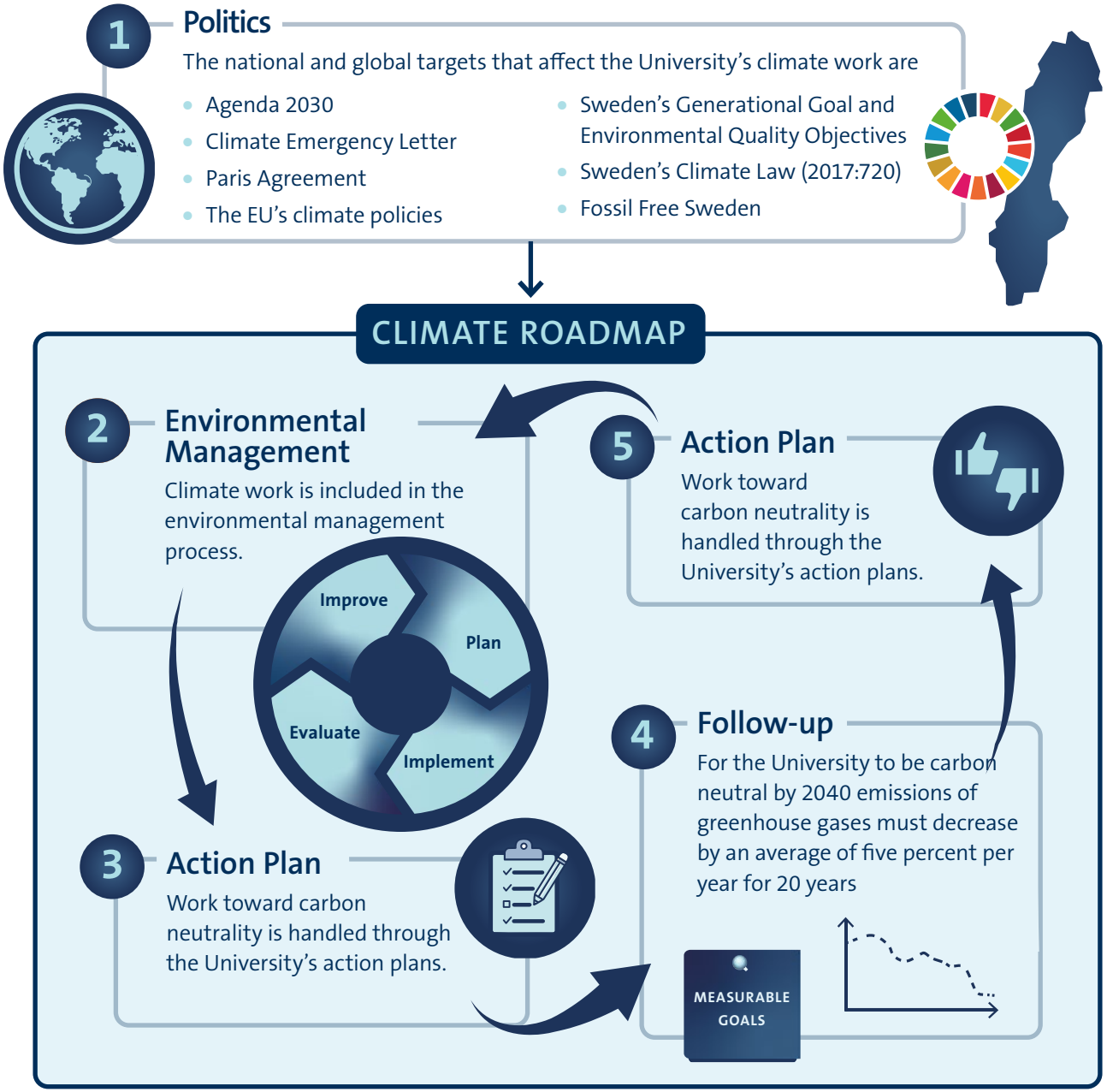
The University's overarching responsibility for achieving carbon neutrality by 2040 and contributing to a climate-smart and resource-efficient society lies with the Vice-Chancellor and the rest of the University leadership. However, achieving these goals requires efforts from all parts of the University. To manage its environmental work at both local and university-wide levels, the University has an environmental management system, in accordance with the Regulation (2009:907) on Environmental Management in State Authorities (as well as in accordance with ISO standard 14001:2015). This system offers a structured approach to planning, implementing, and following up on environmental issues, including the climate work outlined in this climate action plan. In late spring 2024, Stockholm University underwent a re-certification of ISO 14001. The external auditors were unanimously positive about the University's environmental work, and it was awarded a renewed ISO certificate.

Since the first version of the climate action plan was adopted by the Vice-Chancellor in December 2020, the conditions for implementing systematic climate work have improved significantly through a series of administrative and organisational changes. At the same time, knowledge about the University's emissions is continuously increasing, thanks to the climate tool that the University has procured, which illustrates all of its emissions (see section 3). However, it is a challenge for the organisation to work towards a goal that is far in the future, with constantly changing conditions ranging from new technology for transport and energy production to shifting social norms, behaviours, and consumption habits. Political instruments, such as a more efficient emissions trading system, may also alter the conditions for how the University will reach its climate goals. To handle both new knowledge and changing conditions, the climate action plan is revised every two years. The governance of the organization to reach carbon neutrality by 2040 is managed through rules, policies, action plans, and measures with shorter time horizons.

The efforts to achieve climate goals are evaluated through regular monitoring of emissions for each science area we well as through follow-ups of the University's action plans and strategic plans. The boards of human and natural science and the administrative divisions are expected to report their implemented and ongoing actions, based on the current Climate Roadmap.

Figure 2 (next page) shows the global agreements, laws, and regulations on which the climate action plan is based. The figure also illustrates how the plan is integrated into the University's environmental management system.

Figur 2. The climate action plan outlines the path for the University's climate work until 2040. **1)** These efforts are governed by policies at the national and global levels. **2)** Proposed measures presented in the Climate Roadmap are managed within the framework of the existing environmental management system's structure and governance. **3)** The work towards achieving carbon neutrality is handled through the University's two-year action plans. **4)** Set targets are then followed up based on direct and indirect greenhouse gas emissions from areas such as business travel, energy use, and goods and services. **5)** Both the environmental management system and the Climate Roadmap will be regularly revised, not only based on the results of the evaluation of the set goals, but also based on changing conditions, such as behavioural changes and new technologies



Stockholm University

3. A Carbon Neutral University by the Year 2040

Stockholm University

3.1. How greenhouse gas emissions are measured

As a government agency, Stockholm University is required to report certain emissions – but not all – according to the Regulation (2009:907) on Environmental Management in State Authorities. To achieve carbon neutrality, a broader understanding of the emissions generated by the University's operations is necessary.

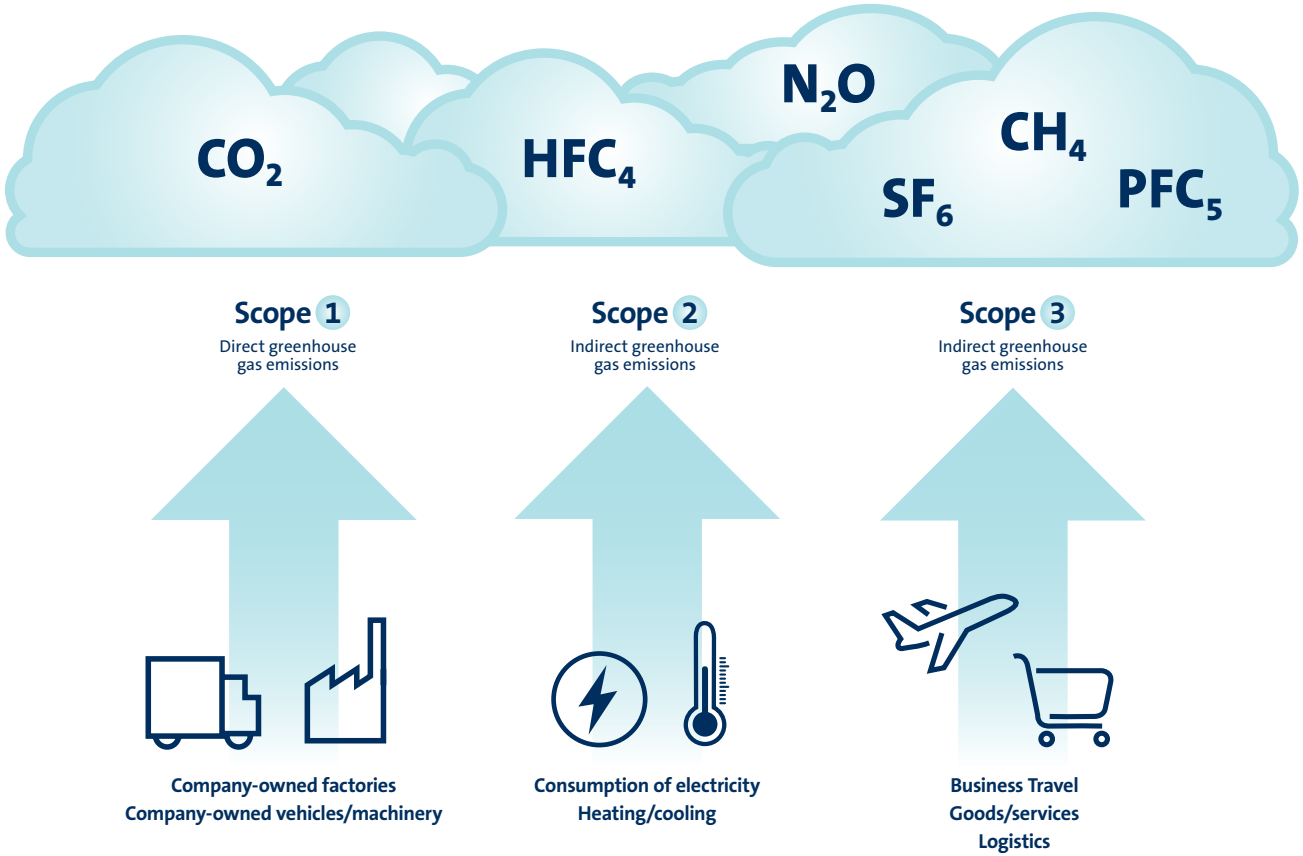
The Greenhouse Gas Protocol (GHGP) is a framework used to identify and track where emissions are being generated and to determine the amount of influence and control an organisation has over it. GHGP was primarily developed for use in the private sector, for example in manufacturing, but other types of organisations can also follow its framework. Stockholm University uses the GHGP to categorise and group its emissions.

Broadly speaking, the GHGP is based on three so-called scopes. Within each scope, there are emission categories depending on the sector in which the organisation operates (see Figure 3):

Scope 1
Emissions from the combustion of fossil fuels, for example in company-owned factories or from company-owned or leased vehicles/machinery.

Scope 2
Emissions associated with energy use (electricity, district heating and cooling).

Scope 3
Emissions from the purchase of goods and services, such as logistics, digital services, air travel, taxis, hotel stays, and material consumption.



Figur 2. The framework presented in the Greenhouse Gas Protocol (GHGP) is useful for identifying and monitoring where greenhouse gas emissions are generated within an organisation, as well as assessing the opportunities to influence those emissions. **Scope 1** covers direct emissions from the combustion of fossil fuels, for example in proprietary manufacturing facilities or from owned or leased vehicles and machinery. **Scope 2** innefattar indirekta utsläpp från förbrukning av el, fjärrvärme och fjärrkyla. **Scope 3** refers to other indirect emissions arising from the procurement of goods and services, such as logistics, digital services, air travel, taxi journeys, hotel stays and material consumption.

The GHGP distinguishes between direct (Scope 1) and indirect (Scopes 2–3) greenhouse gas emissions. At Stockholm University, emissions fall primarily (approximately 95%) under Scopes 2 and 3, which is why the Climate Roadmap focuses mainly on these two scopes. Development is also underway on a potential new category, Scope 4, which concerns emissions that can be avoided. These may include emission reductions occurring outside a product's life cycle, e.g. through research and development efforts that make an existing product more energy-efficient. In this sense, Scope 4 would also encompass new research findings and the knowledge generated through the University's research and education (see Section 5). These categories of emissions are significantly more difficult to quantify than other categories, but may have considerable importance for society's broader transition and could constitute a major contribution to increased resource efficiency and reduced emissions. The possible future application of a fully developed framework that includes Scope 4 – and better addresses avoidable emissions – will be evaluated in subsequent revisions of the Climate Roadmap. Regardless of which scope these categories are eventually assigned to, they must be described qualitatively and be based on various scenarios

In 2019, Stockholm University began exploring how to calculate its total emissions in an efficient and reproducible manner. A climate tool, provided by an external supplier, was acquired and launched in early 2022. The tool is a sophisticated application of the GHGP and includes emissions from Scopes 1 through 3. It utilises both collected primary data – for instance, from the contracted travel agency – and secondary data from the University's accounting system. The tool provides insights into the distribution of emissions across major categories such as business travel, properties, and goods and services, as well as the volume and sources of emissions at individual academic and administrative divisions. It serves as a basis for prioritising measures and assessing their effectiveness. The tool also supports staff in developing a deeper understanding of emissions within their own departments or divisions. A full report on the tool's methods, findings and limitations is available on the University's website.

In spring 2023, the University launched the Flight App, a new feature in its business intelligence system, which visualises emissions from air travel. The app enables all University staff to view air travel emissions by academic or administrative division, and how these relate to the University's target of reducing air travel emissions by an average of five percent per year. The app is updated monthly with new data from the University's travel agency, enabling continuous monitoring.

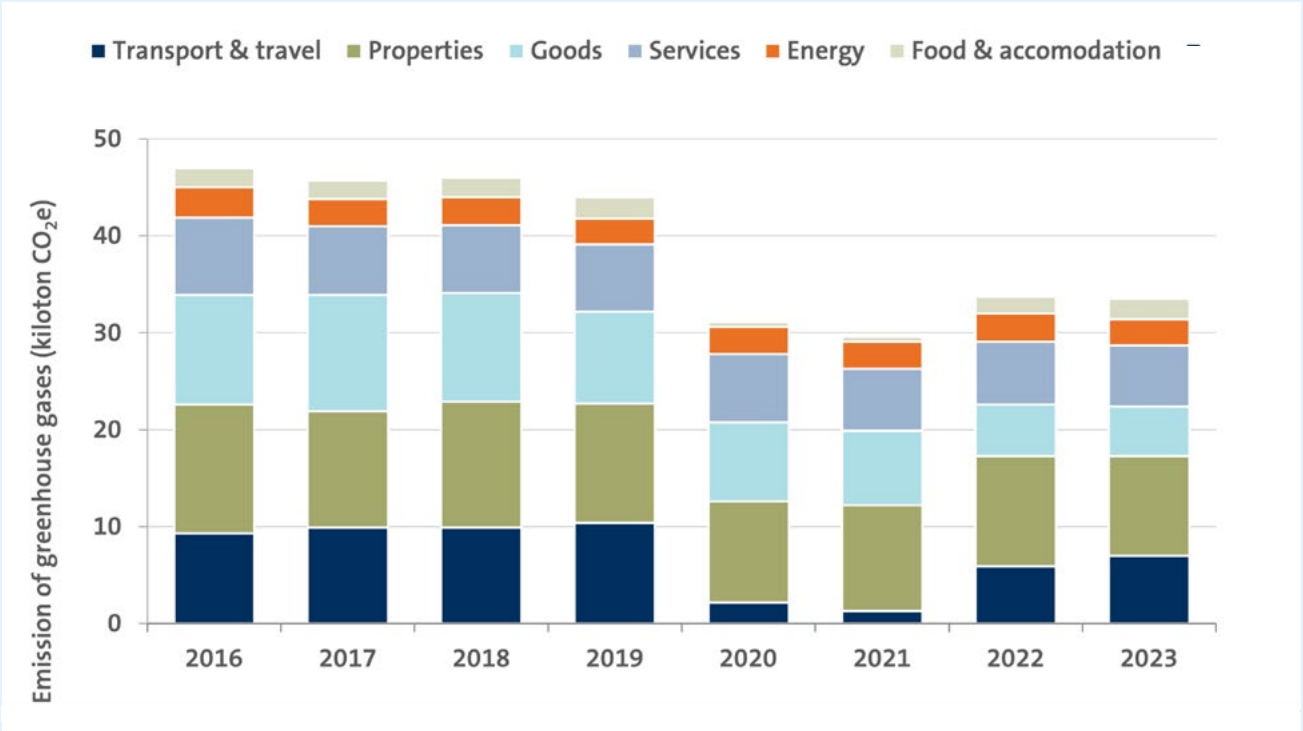
3.2. The emissions of Stockholm University

Stockholm University's climate footprint was measured using the Carbon Intelligence System (CIS) from 2016 to 2023. These years can be divided into three distinct periods: before the pandemic, during the pandemic, and after the pandemic. In the pre-pandemic period (2016–2019), Stockholm University's climate footprint remained stable, at approximately 46 kilotons of carbon dioxide equivalents (CO_2e) per year.

During the pandemic years (2020–2021), emissions dropped to a significantly lower level – about 30% lower – primarily due to reduced air travel. In 2022 and 2023, emissions increased compared to the pandemic years, but were still 23% lower than in the reference year 2019. The reduction compared to 2019 is attributable both to decreased emissions from air travel and to a substantial reduction in emissions associated with the procurement of goods and services. A consistent feature across all years is that the buildings category – representing emissions related to new construction, renovation, and property operations – is the single largest category.

During the pre-pandemic period (2016–2019), the categories transport and travel and goods were at roughly the same level, effectively sharing second place. The decline during the pandemic years (2020–2021) is primarily due to reduced travel, but also to a certain extent to lower emissions linked to procurement of goods. In the years following the pandemic (2022–2023), total emissions were somewhat higher than during the pandemic, but still significantly lower than before the pandemic. This is primarily due to reduced emissions from business travel and from the purchase of goods and services.

During the pre-pandemic period (2016–2019), the average climate footprint was 1.7 tons of CO_2e per full-time student, or 9.5 tons of CO_2e per full-time employee. During the pandemic (2020 and 2022), the average footprint dropped to 1.1 tons CO_2e per student, or 6.4 tons CO_2e per employee. In 2023, the footprint remained at 1.1 tons per student and 7.1 tons per employee.



Figur 4. Stockholm University's carbon footprint within all main categories from 2016 to 2023.

Stockholm University

4. Prioritised areas for addressing Stockholm University's emissions

Stockholm University

4.1. General background

Stockholm University is working actively to reduce its direct and indirect greenhouse gas emissions. Nevertheless, a certain share of total emissions will likely remain in 2040. For instance, it is unlikely that aviation will be entirely carbon neutral by that time. This means that the university must also compensate for residual emissions by generating so-called negative emissions – measures that actively reduce the concentration of greenhouse gases in the atmosphere.

In order for Stockholm University to achieve carbon neutrality by 2040, this means – mathematically speaking – that greenhouse gas emissions must be reduced by an average of 5 percent per year between 2020 and 2040, excluding negative emissions. Therefore, emission reductions must take place across the entire organisation and encompass all prioritised areas. It is reasonable to assume that reductions will continue to occur at varying rates within the different prioritised areas.

Historically, and likely going forward, the largest shares of the University's emissions have come from and are expected to continue to come from the buildings and energy, procurement of goods and services, and business travel. These areas are therefore prioritised for emission reduction efforts.

To reduce emissions in these priority areas, the University needs to collaborate with external actors – particularly in areas over which it does not have full control. Against this background, it is encouraging that Stockholm University and Akademiska Hus in June 2023 signed a joint letter of intent. Its purpose is to clarify the parties' shared ambitions in the field of sustainability and to define concrete forms of cooperation and strategic areas for collaboration in upcoming development efforts. The joint work began in early 2024, when a steering group and five working groups were formed with staff from both parties, focusing on the areas identified in the letter of intent:

- **Energy Use:** The parties will jointly aim to reduce energy usage and ensure it is climate neutral, in line with the targets of the Paris Agreement. This includes both building-related and operational energy.
- **Property Portfolio, New Construction and Renovation:** Before any new construction or renovation, the parties will assess the need for space. Material assessments will also be conducted to promote reuse of construction materials, furniture, and fittings, and to encourage the selection of healthy and long-lasting building materials.
- **Meetings and Travel:** The parties will jointly strive to facilitate climate-smart meeting formats and travel choices.
- **Waste Management:** The parties will work together to improve waste sorting infrastructure, specifically aiming to reduce the share of 'combustible waste' and to increase the separation of plastic waste.
- **Green Campus:** The parties will promote the development of green spaces and increased biodiversity on campus.

Until now, the University has only had one clear and measurable target. This target was linked to the 2022 public service agreement, which, among other things, stated that all higher education institutions must develop measurable goals to reduce the environmental and climate impact of business travel by 2025, compared to 2019 levels. Stockholm University chose to set an interim target of a 25 percent reduction by 2025. Although emissions from business travel have decreased significantly and it currently appears that the goal will be achieved, there is reason to believe that this reduction has already plateaued or will do so soon. It is therefore important to intensify efforts to reduce emissions in other priority areas.

If the University is to continue reducing emissions by an average of 5 percent per year from 2020 to 2040, total emissions must be reduced by 30 percent by the end of 2026, compared to 2019 levels. A realistic assumption is that the University can achieve a 30 percent reduction in emissions from both business travel and the procurement of goods and services. This is therefore set as the target for the coming period. However, there is considerable uncertainty about who is responsible for emissions related to buildings and energy, and how these emissions should be calculated. As such, it is currently not considered meaningful to set a measurable target for that emissions category.

4.2. Properties and Energy

Current Status

Emissions from properties and energy remain at roughly the same level as before, but the data underlying the calculations is uncertain, and the University has limited control over these emissions. For example, energy consumption decreased by about 20 percent between 2019 and 2023, but a corresponding reduction in greenhouse gas emissions is not reflected in the climate tool, as the calculations also account for indirect emission factors.

Challenges and Opportunities

Given the University's ambition to reduce total emissions by an average of 5 percent per year until 2040, there is reason to believe that achieving this in the short and medium term will be difficult in this area. This is primarily due to the significant uncertainty surrounding the underlying data and calculations, as mentioned above. To achieve greater emission reductions, national and EU-level policy decisions will be crucial. In particular, the new Emissions Trading System (ETS), which from 2026 will also include transport and buildings, will become an important tool.

As outlined above, it is also essential that the University, in consultation with Akademiska Hus and other property owners, identifies how emissions from buildings can be reduced and ensures that resources are allocated where they will have the greatest impact. Within the Climate Network of Swedish Higher Education Institutions, the focus group on Buildings and Energy has developed the document Sustainable Buildings and Facilities – Guidance for Swedish Higher Education Institutions, which provides recommendations for reducing greenhouse gas emissions in this area. These recommendations will play an important role in the facility optimization project and in collaboration with Akademiska Hus.

According to the memorandum of understanding between Stockholm University and Akademiska Hus, the need for space must always be evaluated prior to new construction or renovation, based on the following principles:

1. Use existing spaces – preserve the status quo
2. Optimize existing spaces – be smart
3. Renovate – refine
4. New construction projects – build for the future

The greatest opportunities for reducing emissions from properties and energy, according to current assessments, lie in premises that are not being used to their full capacity. Based on the University's Facilities Plan 2023–2026, the Property Management Division is working on a space optimization project aimed at reducing the total leased area by making more efficient use of existing facilities and co-locating operations currently located outside the Frescati area, where it is economically viable.

It is evident that Stockholm University's property portfolio has significant potential for optimization. Given the overall conditions, the project's goals can be achieved by consolidating several operations currently located outside Frescati and Albano. In concrete terms, this requires a better understanding of how facilities are actually used, based on more and better data than is currently available. For instance, so-called sensor and scanning projects can be conducted to plan facilities more efficiently.

It is also important that the University defines policies and guidelines at a higher level. This might include policies governing new construction or renovation projects in office environments based on functional requirements (Decision basis from Luleå University of Technology, LTU-1046-2020), or the development of rules for more efficient room booking.

Objective

Currently, there is uncertainty about who is responsible for emissions from properties and energy, and how these emissions should be calculated, making it impractical to set a measurable sub-target. Instead, the main ambition for the upcoming two-year period must be to clarify responsibilities and improve emission calculations, in close collaboration with property owners. Since Akademiska Hus has climate goals that are similar to the University's, it should be investigated whether both parties can use the same system for calculating emissions from properties and energy.

Although the University's climate calculation tool provides a good overview of emissions across various areas, it is not entirely certain that the tool is optimal for calculating and presenting emissions specifically from properties and energy. Akademiska Hus can calculate emissions from renovations, new construction, and operations with significantly greater precision than the climate tool

Proposed measures for the period 2025–2026

- Ensure that a sustainability perspective is integrated into the space optimization project.
- Work to reduce emissions and improve energy efficiency in the property portfolio, in collaboration with property owners.
- Investigate the possibility of using the same system for calculating emissions from properties and energy as Akademiska Hus.
- Improve the climate tool's calculations for existing properties by securing access to detailed and relevant data from property owners.

4.3. Procurement of Goods and Services

Current Status

As described in Section 3.2 above, Stockholm University's total greenhouse gas emissions had significantly decreased by the end of 2023 compared to the reference year 2019. This decrease is primarily due to reduced procurement of goods and reduced travel. The same trend is not observed for the procurement of services. However, there is significant uncertainty in this emissions category. The climate calculation tool is based on financial data, and, for example, the library incurs high costs – and thus high calculated emissions – for services related to digital journals. Currently, it is highly uncertain whether these costs actually generate emissions to the extent indicated by the climate tool.

Challenges and Opportunities

From a climate perspective, the best option is, of course, to avoid purchasing goods or services. However, to ensure successful education and research, it is essential for the University to procure goods, services, and contracts based on operational needs. By focusing on reuse of furniture, equipment, and construction materials, the University can still achieve significant environmental and financial savings. Reuse reduces emissions despite the increased need for transportation, storage, and repairs. The University can reduce its climate footprint and resource use in this category by adhering to the following principles:

1. **Direct reuse**
   – use existing furniture and construction materials.
2. **Adaptation of direct reuse**
   – modify, repair, and renovate.
3. **Purchase reused products** – procure reused products within a circular system through sustainable, non-toxic flows.
4. **New purchases within a circular system**
   – buy new products from circular flows.
5. **Divestment within a circular system**
   – sell or donate within a circular system.

Currently, the University supports internal reuse through a furniture storage managed by the Property Division, where departments can drop off and collect used furniture and equipment. There is also a room where reusable lab equipment is stored, initiated by the University's lab safety network coordinator. Both initiatives are relatively small and limited in their ability to accept furniture and equipment. Additionally, there is no clear overview of available items, despite high demand for reuse or replacement. In 2024, an internal reuse group was formed to improve and promote internal reuse opportunities.

Some departments and divisions are also working with adaptation of direct reuse, meaning they repurpose or repair existing furniture or fittings. Through the national framework agreement Circular Furniture Flows, departments can purchase reused furniture or sell items.

When purchasing new goods, it's not just the items themselves that impact the climate but the entire process from production to delivery. According to the University's procurement policy (Ref. SU FV-4559-23), Stockholm University should:

- Set function-based requirements considering the full lifecycle of the product.
- Set environmental and sustainability requirements that prioritise solutions with the lowest environmental impact, relative to cost and quality.
- Contribute to a sustainable society by demanding accessibility for people with disabilities, human rights, fair working conditions, and social responsibility in procurement.

In addition to continuing green procurement, it is important to extend the lifespan of purchased products and materials. One product group with a significant climate impact is computers and other types of IT hardware. Currently, the University provides computers through the 'Workplace Service', which replaces devices every three years. Retired IT equipment is handled by a service that refurbishes items with second-hand value and responsibly recycles the rest. Several other Swedish universities have extended hardware replacement intervals to reduce environmental impact. Given Stockholm University's ambition to be carbon neutral by 2040, it is timely to revise the University's Green IT Policy, which dates from 2013.

Another IT-related area to monitor is the environmental impact of data centers. Stockholm University uses many cloud-based IT services, which rely on data centers. These centers generate (indirect) emissions through energy use, hardware production, and cooling. According to the International Energy Agency (IEA), data centers globally consumed over 300 TWh of electricity in 2022 – nearly double Sweden's total electricity production in 2023. IEA predicts that data center electricity consumption will almost double by 2026, with exponential growth in demand driven by artificial intelligence (AI). AI alone is expected to consume around 70 TWh by 2026 – a tenfold increase compared to 2023. These issues – data centers in general, and AI in particular – could be addressed in an updated Green IT Policy, for example by requiring vendors to have energy efficiency action plans for their data centers.

Another product group with a relatively large emissions share is chemicals and chemical products, representing almost 5 percent of the University's total emissions and about 25 percent of goods purchased in 2023. Organic chemicals, which dominate this category, are currently almost exclusively fossil-based. Initiating a procurement process for fossil-free alternatives would send a strong signal that the research community is committed to sustainability and would enable individual researchers to reduce their climate footprints. However, before such a procurement process can begin, it is important to assess whether there is sufficient interest among departments engaged in chemical-intensive research.

As with buildings and energy, the University only partially controls emissions from procurement. Major societal transitions will be required to fully eliminate

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these emissions. It is therefore promising that the Higher Education Institutions' Climate Network has formed a focus group to develop guidelines and recommendations for reducing greenhouse gas emissions from procurement in Swedish universities. However, this group is less advanced in its work than the group focusing on buildings, and no national recommendations are available at the time of writing

Objective

As described above, it is realistic to reduce emissions from procurement of goods and services by an average of 5 percent per year – at least for the foreseeable future. To make this possible, reuse must be improved, the general lifespan of products extended, and each purchase made as resource-efficiently as possible. Given that a large share of emissions from services is linked to access to digital journals, it is also important to review how those emissions are calculated in the climate tool.

In summary, it is fully reasonable to aim for a 30 percent reduction in emissions from procurement of goods and services by 2026, compared to the reference year 2019

Target for 2026

Stockholm University will reduce emissions from procurement of goods and services by 30 percent by 2026, compared to the reference year 2019.

Proposed Measures for 2025–2026

- Investigate which product groups can have their lifespans extended through prolonged use or reuse, and identify the requirements and criteria that promote longer product life.
- Explore the possibility of extending the usage period for computers and other hardware.
- Establish a system for reuse of furniture, equipment, and laboratory furnishings.
- Update the University's Green IT Policy, both generally and specifically to address the environmental impact of data centers and AI.
- Improve the climate tool's emission calculations for high-cost services, where feasible.

4.4. Business Travel

Current Situation

Business travel is arguably the area that, in recent years, has received the most attention within the University's climate efforts. As described in Section 3.2 above, Stockholm University has also been highly successful in reducing its greenhouse gas emissions in this area and is, so far, meeting the target of a 5 percent annual reduction in emissions compared tothe reference year of 2019.

Challenges and Opportunities

The fears that emissions from business travel would return to pre-pandemic levels have, therefore, not materialised. The potential to reduce greenhouse gas emissions from business travel has improved – due to the climate tool and the flight app, changes in travel patterns following the pandemic, and the substantial increase in the use of digital solutions for research, teaching, and communication. Furthermore, the University's stringent policy on meetings and travel, as well as the increased feasibility of replacing air travel with land-based alternatives such as trains, has continued to improve. However, there remains significant room for improvement in how train journeys are booked, both with the contracted travel agency and more generally within Europe, where a unified booking system is still lacking. In recent years, new travel agencies specialising in train travel – particularly international rail travel – have emerged on the market. The possibility for the University to engage such a specialised agency alongside the existing one should be explored.

Another factor contributing to the continued appeal of air travel is that train journeys may, in some cases, be more expensive than flights – not least because business travel by train may require additional overnight stays in hotels. A number of Swedish higher education institutions have therefore introduced internal climate levies, which can be used to subsidise, for example, train journeys when these are more expensive than flights. Some individual departments at Stockholm University have introduced systems to subsidise train travel. However, conditions vary significantly across different parts of the University, and the feasibility of introducing a common climate levy system to subsidise train travel should be examined over the coming years.

As with business travel, a focus group has been formed within the Higher Education Institutions' Climate Network to develop guidelines and recommendations for how Swedish higher education institutions can reduce their greenhouse gas emissions. However, this group has not progressed as far as the one working on buildings, and at the time of writing, no national recommendations are yet available.

Objective

Although emission reductions from business travel are expected to level off in the coming years, it remains entirely realistic to achieve a 25 percent reduction in emissions from business travel by 2025 (as set out in the previous revision of the plan) and a 30 percent reduction by 2026, compared to the reference year 2019.

Target for 2026

Stockholm University shall achieve a 30 per cent reduction in emissions by the year 2026, compared to the reference year 2019.

Proposed Measures for the Period 2025–2026

- Ensure that the policy for meetings and travel is followed.
- Improve and simplify the possibilities for selecting land-based alternatives, such as trains, instead of air travel for business trips within Sweden and Europe, in ongoing dialogue with the contracted travel agency.
- Explore the possibility of engaging a travel agency specialising in train travel, particularly international rail travel.
- Investigate the feasibility of introducing internal climate levies to subsidise business travel with significantly lower climate impact than air travel.

4.5. Negative Emissions

There are several areas in which the University could reduce its emissions. As in the first version of the Climate Roadmap, one potential area for emission reductions is the district heating used to heat the premises leased by the University.

With current technologies, negative emissions can only be achieved to a limited extent, and are far from sufficient to neutralise all of our emissions – nor are we close to the level of technological development required. Furthermore, the climate crisis is so urgent that there is no time to wait for such advancements. The carbon sinks currently available are primarily natural environments that absorb greenhouse gases through biological and geological processes, such as forests, wetlands, and oceans. These natural environments cannot absorb emissions at the scale or speed that is required. The IPCC's reports clearly highlight the urgent need to reduce actual emissions.

Stockholm Exergi is planning to build a facility for so-called bio-carbon capture and storage (bio-CCS) at the Värtan site. If realised, this would become Europe's first large-scale facility for negative emissions, with the aim of capturing 800,000 tonnes of carbon dioxide annually. In 2022, the EU Innovation Fund committed €180 million in support of the project, and in March 2024, the facility was granted an environmental permit. Additional external private investors have also contributed funding, and in July 2024, new regulations for state support of bio-CCS were introduced.

At present, it remains unclear which stakeholders will be able to access district heating with negative emissions. Stockholm University needs to closely monitor developments in this field, maintaining ongoing dialogue with Akademiska Hus and Stockholm Exergi in order to potentially contribute to the advancement of the technology and, in the long term, procure district heating with negative emissions.

Proposed Measure for the Period 2025–2026

- Maintain continuous dialogue with Akademiska Hus and Stockholm Exergi regarding future collaboration on district heating supply that generates negative emissions.

4. Prioritised areas for addressing Stockholm University's emissions

5. Contributing to a Sustainable and Resource-Efficient Society

Stockholm University

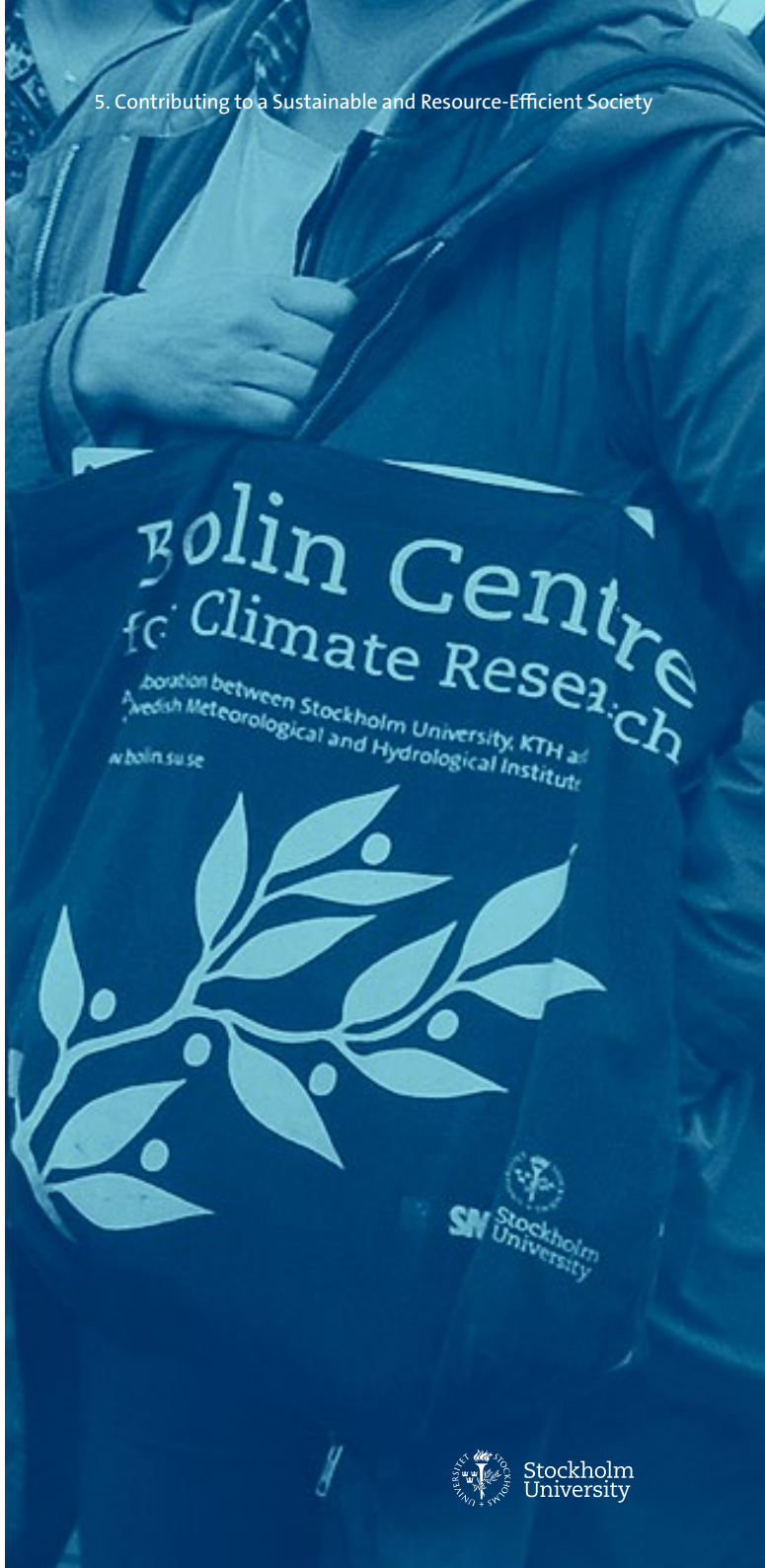
5.1. Background

In addition to the goal of achieving carbon neutrality by 2040, universities play an important role in society as providers of education, knowledge, and research on the causes and consequences of climate change. In other words, the University's core operations contribute to society's understanding and ability to address climate challenges and achieve the UN's global goals for sustainable development.

Stockholm University is characterized by a strong tradition of basic research and education closely tied to research. In addition, efforts are made to ensure that research results can be applied, directly or indirectly, in ways that lead to positive societal development and innovations that benefit society. These efforts are carried out by both teachers and researchers, as well as the University's well-developed organization for collaboration with society. There is potential for development in both research and communication regarding climate, environment, and sustainability.

Demands from the surrounding world to take climate and sustainability challenges seriously have grown stronger in recent decades. This presents both risks and opportunities for Stockholm University. Failing to take the climate crisis seriously enough, or not clearly communicating that the University is acting responsibly, could damage its reputation. By acting decisively and showing that the climate crisis is taken seriously, the University can build trust that positively affects, among other things, student recruitment.

The year 2040 may seem far off, but transitioning structures and implementing measures aimed at achieving climate and sustainability goals is time- and resource-intensive. It is therefore important to support research, education, and collaboration in this area – both by securing ongoing high-quality work and by initiating new efforts. Below are examples of sustainability initiatives within the University's research, education, and collaboration. The purpose of the proposed actions at the end of each section is to strengthen the positive impact of the University's core activities on society's development and supply of sustainability competence, and to increase the dissemination of knowledge and scientific discoveries.



5.2. Prioritized Activities in Core Operations

Research

Stockholm University has many examples of strong, internationally prominent, and leading research environments. Every year, several researchers focused on climate, environment, and sustainability receive funding – amid tough competition – from national funding bodies, foundations, and the European Research Council (ERC). In addition to serving society in a broader sense, research is naturally a key part of the University's efforts to fulfill its goals and mission in the area of environment and sustainability.

In recent decades, Stockholm University has also made strategic investments in research environments that address interdisciplinary research issues. This includes both basic and applied research, as well as research communication. Examples include the Bolin Centre for Climate Research, the Baltic Sea Centre, the Stockholm University Centre for Circular and Sustainable Systems (SUCCeSS), Stockholm Resilience Centre (SRC), Environmental Humanities, Earth System Governance, Navarino Environmental Observatory, the research stations at Tarfala and Askö, and the Stockholm Environmental Law Centre. Through these and other initiatives, Stockholm University is internationally at the forefront of climate, environmental, and sustainability research.

Stockholm University also holds a prominent position in research synthesis work, and its research interacts with society, both internationally (e.g., in the IPCC, IPBES, COPs for climate and biodiversity, the UN Climate Action Summit, or HELCOM) and nationally as a capital city university – close to politics, public administration, and business. The University was recently granted observer status in the UN Environment Programme (UNEP), which increases opportunities for researchers to participate in and influence international meetings on sustainability issues. Teachers and researchers also often hold advisory roles in councils, committees, and steering groups within industry, civil society, and public administration, where research is needed for societal transformation.

Interdisciplinary research collaborations can be supported through various forms of financial and administrative support. In June 2024, a seminar titled How to achieve real integration of social sciences and humanities into transdisciplinary research for a competitive, green, and fair Europe? was held in Brussels, within the EU's research and innovation framework program, organized by the Stockholm Trio. Experts from academia and the European Commission participated. There was a consensus on how to more effectively integrate humanities, arts, and social sciences to encourage interdisciplinary research within the framework program. Since Stockholm University conducts extensive research in humanities and social sciences, which is either directly or indirectly needed to address major societal challenges, it is important to create better conditions for integrating these disciplines. The University should continue to influence the EU's research and innovation policy in this direction and be proactive in seeking funding for environmental, climate, and sustainability research.

Since 2018, there has been a collaboration agreement between Stockholm University and the City of Stockholm in the areas of climate and environment, social sustainability, and culture. The aim is to strengthen and systematize existing collaborations and improve the conditions for future cooperation. In 2023, the city began developing a new environmental program and revising its climate action plan for the next program period (2025–2030), with decisions expected in fall 2024. It is already clear that the city has ambitious climate goals, which require close cooperation with universities and colleges to develop new knowledge. Within the framework of Stockholm Trio for Sustainable Actions (see the section on Collaboration), and under the leadership of the Stockholm Trio, there is ongoing collaboration with the city aimed at initiating joint research projects and seeking external funding to achieve the city's climate goals.

Stockholm University also has a collaboration agreement with Region Stockholm in areas where research contributions are particularly needed. The aim is to contribute knowledge to solve environmental challenges in the region, such as in urban planning. Since many environmental and climate challenges are similar for both the City of Stockholm and Region Stockholm, there is reason to strive for collaboration between the two.

Proposed measures for 2025–2026

- Actively influence research policy, both in Sweden and at the EU level, to better integrate humanities, social sciences, and interdisciplinary research into the framework program.
- Ensure that internal resources are available for effective collaboration with the City of Stockholm, Region Stockholm, and other relevant external actors

Education

It is researchers, departments, scientific areas, and faculties who create and develop educational programs based on their research expertise, specific academic and research traditions, as well as on the advancements and changes occurring within various subjects and research fields. The University is also obligated, under the Higher Education Act, to promote sustainable development in its operations.

To succeed in this, University leadership must, in close dialogue across the different levels of the University, take the necessary actions – for example, to encourage and facilitate interdisciplinary and cross-faculty educational initiatives, and to establish commissioned education programs that respond to societal needs. For interdisciplinary collaborations to emerge – internally, nationally, and internationally – both financial and administrative incentives are needed, as well as meeting places where teachers and researchers can expand their networks and deepen their knowledge of other disciplines.

To remove potential barriers to educational collaborations within the University, it is important to identify the problems and find new solutions. In this regard, the investigation initiated by Rebus (the Vice-Chancellor's Advisory Board for University-Wide Educational Matters and Quality Assurance Systems) during the autumn semester of 2024 is expected to contribute. The mandate for the investigation is broad and includes exploring new ways of thinking about the organization and financing of interdisciplinary education. It is also important to ensure the long-term success of interdisciplinary programs. Investments should be made in skills development in the area of sustainability by creating and supporting seminars, workshops, courses, or networks that connect different subjects sharing common sustainability aspects.

An example of such skills development is the module "Teaching for Sustainable Development," which has been part of the University's higher education pedagogy training since autumn 2022 and is offered to all University teachers. The aim of the course is to provide an overview of the didactic and pedagogical research within the field of sustainable development in teaching and learning, with a focus on the interdisciplinary nature of the content and the democratic purpose of education. The training gives teachers from across the University the opportunity to try out and discuss teaching models and develop them in relation to their own subject area.

Another good example of development work to promote sustainable development in education comes from the Faculty of Science, which in spring 2024 decided to introduce new local degree objectives for all Bachelor's degrees starting in the autumn semester of 2026. One of the new degree objectives concerns sustainability and requires that, to obtain a Bachelor's degree, the student must "demonstrate an understanding of the concept of sustainability and the ability to critically assess its relevance to the main field of study." If this initiative proves successful, it should be investigated whether the same or similar degree objectives can be implemented in more academic fields at the University.

Since society must carry out climate transitions across all sectors, universities need to work continuously to inventory and highlight the educational programs that relate to sustainability. Primarily, this involves making them visible to prospective students, but also to individuals, organizations, and companies in need of skills development. There is room here for both local and central initiatives. At the central level, it can be made easier to establish new commissioned education programs. Central administrative departments can assist with communication efforts to promote the range of both regular and commissioned educational offerings.

Cross-disciplinary collaborations—between domains, faculties, and departments—can benefit the development of programs related to sustainable development. There are already good examples of interdisciplinary courses at Stockholm University, such as "Climate Change Solutions", a climate course that has a major impact on students from diverse educational backgrounds. The course is based on broad collaboration across faculty and subject boundaries at the University.

There are also several bachelor's and master's programs that offer interdisciplinary tracks, including an international master's programme in social science environmental research at the Department of Political Science. At the Stockholm Business School, there is a bachelor's programme in "Business Administration, Ethics and Sustainability", which equips future professionals in the private and public sectors with an integrated perspective on sustainability. At the Department of Materials and Environmental Chemistry, there is a master's programme in sustainable chemistry.

Starting in autumn 2024, the Department of Archaeology and Classical Studies and the Department of Ethnology, History of Religions and Gender Studies will offer a new master's programme in environmental humanities. The programme aims to give students new perspectives and a deeper understanding of environmental and sustainability work by exploring changing relationships between humans, animals, and nature. Although some courses and programmes in environmental humanities exist at other Swedish universities, Stockholm University is the first to offer a master's programme in the subject.

As part of the European Civic University Alliance (CIVIS) (see below), Stockholm University—led by the Department of Environmental Science—is working to develop a new interdisciplinary master's programme to be launched in autumn 2025: "Transdisciplinary Studies of Climate, Environment and Energy", in which all partner universities within the alliance are participating. Developing joint and comprehensive interdisciplinary programmes across faculty and institutional boundaries is challenging and requires close and continuous collaboration between different academic disciplines, as well as strong support from central administration.

Proposed measures for the period 2025–2026

- Catalogue the range of courses and programmes in the field of sustainability, and create new courses and programmes where needed.
- Investigate the possibility of developing and implementing local degree objectives related to sustainability in additional main subject areas.
- Identify and reduce administrative barriers to the development of new interdisciplinary a nd cross-faculty educational programmes.

Students and Student Influence

It is important to develop collaboration with the University's students and student unions in order to obtain valuable ideas from students and to support their efforts in monitoring issues related to sustainability and climate within education and on campus. The student union currently has the opportunity to influence through student representation on the Environmental Council and other bodies, such as the University Board and departmental boards.

The University must assist students in identifying, at an early stage, how the University's courses and programmes can contribute to addressing present and future climate challenges, and how they can help achieve the global goals of Agenda 2030. Even if certain courses and programmes do not have climate and sustainability as their main focus, they may contain elements that are crucial for society's ability to transition. Raising every student's awareness of how their future professional contributions can influence climate efforts can, in the long run, have significant positive effects across society.

To support current students and to attract new ones, it is important to highlight which courses and programmes have a climate or sustainability focus on the University's education portal and in other relevant communication channels.

Proposed measures for the period 2025–2026

- Increase knowledge about sustainability, and promote sustainability within courses and programmes on the University's education portal.

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Academic Collaborations

Stockholm University's strategic investments in research environments that address interdisciplinary research related to climate, environment, and sustainable development have led to many strong collaborations with other higher education institutions, both in Sweden and internationally. As a result, Stockholm University has secured a leading position in terms of obtaining funding for interdisciplinary research, publishing in prominent scientific journals, and developing new research fields that influence international sustainability efforts beyond academia. These collaborations can serve as a foundation for international cooperation on important policy-related processes, such as the IPCC and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), thereby supporting the global sustainability transition. Since parts of this research, which often transcends traditional disciplinary and faculty boundaries, are largely funded through time-limited grants, it is important that the University examines how such research can be secured and developed in the long term.

Strategic collaborations with other institutions with similar sustainability profiles and ambitions can strengthen the University's efforts to achieve carbon neutrality by 2040. Within the framework of the academic collaboration Stockholm Trio, a sustainability group was established in 2021 – Stockholm Trio for Sustainable Actions – consisting of the Chair of the Environmental Council (who is also the Vice-Chancellor's Adviser on Environment and Sustainable Development), the Vice Chair of the Environmental Council at Stockholm University, and their counterparts at The Royal Institute of Technology and The Karolinska Institute. The Stockholm Trio also has other working groups that may positively impact how the universities collaborate in areas such as research and education, which in turn may influence opportunities for joint efforts in the field of sustainability.

Stockholm Trio for Sustainable Actions worked during 2021–2022 to develop a proposal on how the collaboration could contribute to a sustainable society and the transition to resource efficiency and climate neutrality. Based on this proposal, the collaboration's steering group decided in 2022 to invest one million SEK per university per year for four years in order to:

- strengthen the Stockholm Trio's and the individual universities' brands, both in general and within the sustainability domain
- enhance the universities' capacity to strategically contribute knowledge for rapid and scientifically grounded decisions necessary for a sustainable societal transition
- enable new research and education across faculty boundaries, in close collaboration with the city, the region, non-profit organisations and industry (inter- and multidisciplinary education)
- strengthen society in the areas of climate, health, innovation systems and entrepreneurship.

During the first two years of the initiative, the Stockholm Trio sustainability group has worked to increase interdisciplinary collaboration in education

and research by providing support for projects and seminars. In addition, they have begun mapping competencies and established a shared point of contact, partly through a pilot study based on bibliometrics, and partly through a survey directed at all departments and research centres at the three universities. As previously mentioned under the "Research" heading, the group continuously works to deepen collaboration with key partners in the Stockholm region, such as the City of Stockholm and Region Stockholm.

Stockholm University is also one of the hosts of the Swedish Higher Education Climate Network, which is active from 2022 to 2025 with the aim of achieving carbon neutrality within the higher education sector. This network is funded by Vinnova and Formas, as well as by the universities themselves (see sections 1.4 and 4). Stockholm University faces several complex challenges in the coming decades, which require collaboration with actors both nationally and internationally. The Climate Network and Stockholm Trio offer excellent platforms for cooperation between higher education institutions in Sweden that support the societal transition needed to achieve the global sustainability goals. The Climate Network currently has focus groups addressing issues related to buildings, sustainable leadership, procurement and purchasing, education for sustainable development, and business travel. Participants in these focus groups, drawn from both core operations and administrative support units across many institutions, are tasked with developing and refining cross-institutional guidelines, tools and processes.

Stockholm University also has unique opportunities to leverage international academic collaborations to develop its research and education in the field of sustainability. A good example of this is CIVIS, which aims to facilitate cross-border mobility in a sustainable and resource-efficient way for students, teachers and other staff. CIVIS focuses on five global challenges: climate, environment and energy (led by Stockholm University), as well as digital and technological transformations. In summer 2022, CIVIS received funding to continue for another four years.

Proposed measures for the period 2025–2026

- Provide the necessary resources to enable collaboration with other higher education institutions to carry out national and international research and partnership projects in the field of climate and sustainability.

Collaboration

The University's leading education and research in sustainability create both opportunities and strong arguments for initiating, developing, and running collaborative projects focused on climate and sustainability. The University already has several platforms for the exchange of knowledge and experience with various societal actors, such as public authorities and industry. It is important to ensure that sustainability and climate remain a central part of the steering documents that govern collaboration. Interdisciplinary research on climate, environment, and sustainable development often requires extensive collaboration both within and beyond the academic world – something that must be considered in the University's recruitment and staffing strategies.

The recurring event Sustainability Forum has, over time, developed into a natural platform where researchers and other societal actors meet to exchange knowledge and ideas across faculty and disciplinary boundaries. The forum should focus on issues concerning the transformation of society as a whole, the important role of universities as societal actors, and how climate change and the climate transition interact with other developmental and sustainability-related aspects. In the autumn of 2023, the forum was held for the first time under the auspices of the Stockholm Trio, under the name Universities and the 2030 Agenda: taking stock and moving forward. Going forward, the forum will continue to be organised within the framework of the Stockholm Trio. It will take place every other year, with Karolinska Institutet serving as host in 2025.

Other good examples of sustainability-focused collaboration platforms include:

- The Climate Arena at the Bolin Centre, where researchers and industry representatives co-create climate solutions
- SRC's Executive Programme for business leaders
- SeaBOS, which brings together the ten largest fishing companies in the world
- Collaboration with the EAT Foundation, contributing to new international standards for dietary guidelines that are both sustainable and nutritious.
- Efforts supporting IPCC, IPBES, UN conferences and preparatory work for such global meetings are also examples of how Stockholm University actively contributes to societal development.

Collaboration with the City of Stockholm and Region Stockholm was previously mentioned in relation to research, but their importance to sustainability efforts goes beyond research. For example, collaboration may involve staff skills development, outreach to school-children, and engagement in issues such as widening participation and citizen dialogues. One strong example of such collaboration is Vetenskapens Hus (House of Science), which is jointly owned by Stockholm University and KTH Royal Institute of Technology, with the City of Stockholm as a major partner alongside AstraZeneca and Scania. Over the past 20 years, this initiative has been a major source of inspiration and knowledge in the Stockholm region, aiming to boost pupils' interest in science from primary through to upper secondary school, as well as supporting their teachers. In recent years, sustainability has become a core theme of the initiative, with a strong focus on widening participation.

Proposed measures for the period 2025–2026

- Map and highlight the University's existing platforms for sustainability collaboration
- Ensure that sustainability and climate remain a central focus in the University's collaborative activities
- Clarify the strength of the Stockholm Trio's sustainability work and societal collaboration by drawing on the collective knowledge and resources of the three institutions.

6. Responsibility and Following-up

Stockholm University

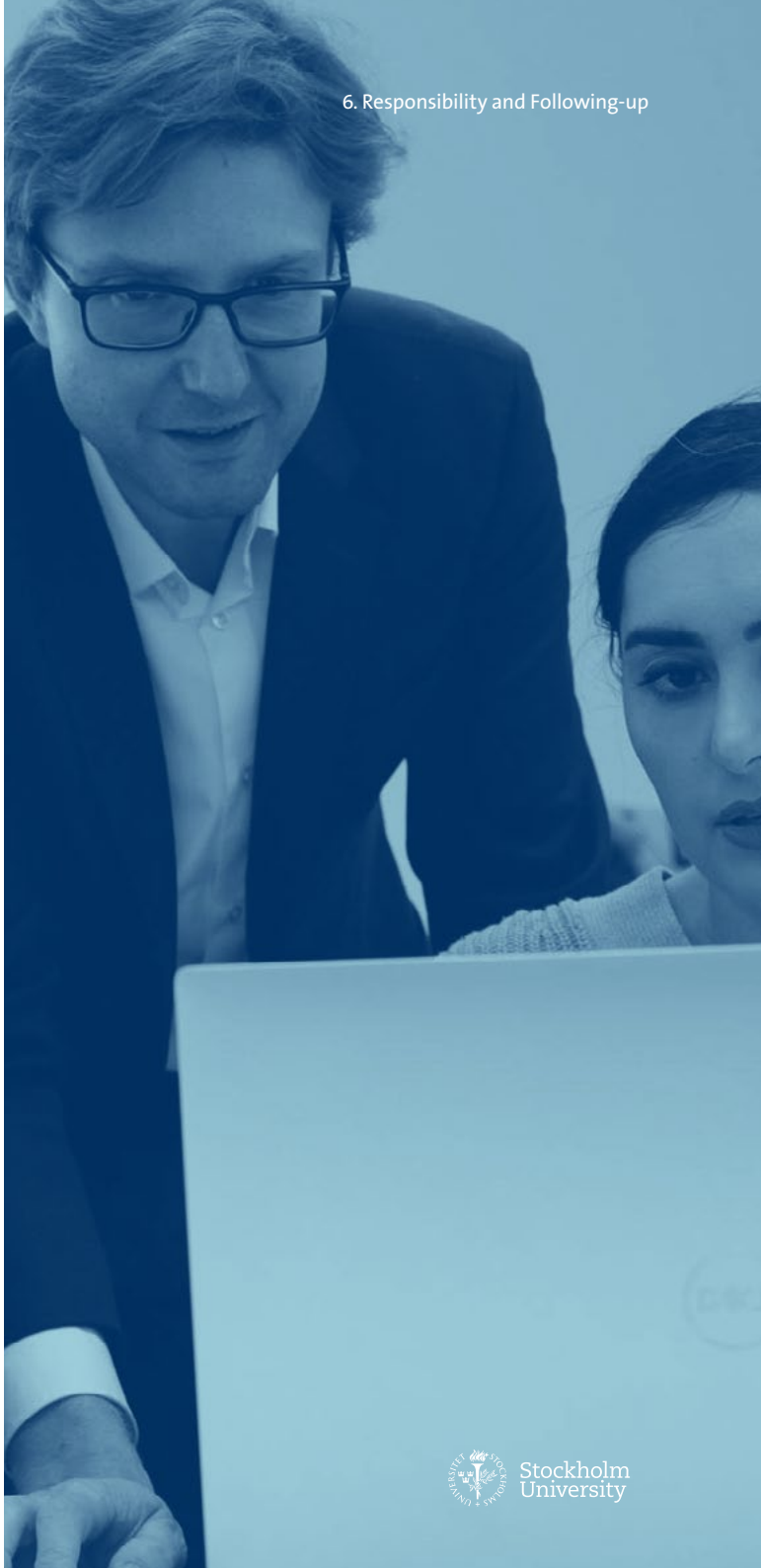
6. Responsibility and Following-up

The Climate Roadmap extends to the year 2040 – that is, 16 years into the future. It is challenging to relate to a goal that lies so far ahead. Therefore, the routines for revising and following up on the plan must be structured in a way that takes the long-term horizon into account. The Environmental Council is thus responsible for conducting a comprehensive follow-up of the Climate Roadmap every two years to ensure both short- and long-term effectiveness. The content of the Climate Roadmap is influenced both by how the University's strategies evolve and by developments in the wider world.

The University leadership holds the overall responsibility for achieving the goal of carbon neutrality by 2040. Area boards and the administration must report on completed and ongoing measures in relation to the Climate Roadmap. Additionally, each department, division, and center within the faculties must review their activities and identify where emission reductions can have the greatest possible impact, based on the activities they have control over. Local environmental action plans should include short-term, operationally relevant emission reduction targets along with corresponding measures.

At the university-wide level, the central environmental function, together with the Environmental Council and the climate expert group, contributes to developing proposed measures in collaboration with relevant departments and administrative divisions. The central environmental function is responsible for monitoring greenhouse gas emissions.

The Climate Roadmap is also integrated into the University's environmental management system and is linked to the University's action plans and strategic plans. The environmental management system ensures that the entire University actively works to implement the measures..



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Stockholm University
Central Environmental Function at the President's Office
E-mail: miljo@su.se

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