KTH Sustainable Development Goals Report 2024

Table of Contents

A Message from the President of KTH Royal Institute of Technology

"We take the lead for a sustainable society." These words are at the heart of our Vision, adopted in 2024 by the Univeristy Board, and guide us every day. They give us direction, fuel our dedication, and reaffirm our commitment to contributing to a world that is not only sustainable but also fair.

Our focus goes beyond just sustainable development; it's about weaving sustainability into every discipline and preparing our students to become the kind of leaders and practitioners the future urgently needs – experts who blend technical skills with ethics, policy, and a deep awareness of equality.

This vision is alive. It's visible in our research labs, in our classrooms, and in the innovations emerging from KTH's campuses. The urgency is real, confirmed by the latest climate science and the 2025 global reports reminding us that time is running out.

The challenges we face – energy crises, climate change, a more vulnerable digital world – are complex. But so are our responses. Our work on energy systems, cybersecurity, climate-smart urban planning, sustainable food systems, and materials science is growing stronger. We're embracing responsible Artificial Intelligence as a tool for good, and we remain deeply committed to diversity and inclusion in all we do.

Complex problems demand collaboration. The synergy between KTH, industry, public institutions, and international partners is central to our success. Together, students, researchers, educators, and society take on the challenge of shaping the future here and now.

But intentions alone are not enough. We must translate ambition into tangible results. That's why we are developing practical tools, like our carbon budget, and why sustainable practices – like climate-smart food procurement – are part of who we are.

Sustainability is the backbone of our mission, and the UN Sustainable Development Goals continue to provide the framework and momentum we need. They guide our steps in education, research, collaboration, and daily operations.

In short, we aim to be bold, creative, and responsibility-driven by purpose and a shared commitment to building sustainable and equitable societies.

This report illustrates just some of the ways KTH is advancing all 17 SDGs through the power of multidisciplinary engagement.

Anders Söderholm
President, KTH Royal Institute of Technology

Students have the floor

Over the past academic year, we have seen several encouraging steps forward in student-led sustainability efforts. Initiatives introduced in previous years have shown progress: the reuse of furniture has reduced waste, china and cutlery have been purchased for more venues in Nymble to minimise disposables, and improvements in waste sorting have, at times, worked well. These measures show that when students and THS take action together, tangible changes can be achieved.

At the same time, the past year has also highlighted areas where more work is needed. Food sorting is no longer consistently practised in all chapter halls, waste sorting in Nymble still struggles to function effectively due to the very mixed use of the building, and there have been instances of students misusing the disposal systems across campus, most likely due to a lack of routines. While these are setbacks, they also provide valuable insight into where we must focus our efforts and how we can build stronger practices moving forward.

Work on these improvements has already begun. THS has produced new guidelines to clarify and simplify waste management across campus, and chapters are developing similar frameworks for their own halls. THS has also set the goal of increasing occupancy and activity in Nymble, optimising the use of the building and its potential. Finally, students were represented in KTH's decision to adjust campus opening hours, a measure that improves energy efficiency and ensures shared spaces are used more effectively.

Our commitment as students is to continue building on progress while turning challenges into opportunities. Together with KTH, we are striving to make sustainability an integrated and lasting part of campus life.

Marcus Dahlqvist
THS Head of Student Social Activities

From basic research to societal benefits

Since 1827, KTH has grown to become a leading international technical university. As the largest institution in Sweden for technical education and research, we bring together students, researchers, and educators worldwide. Our activities are grounded in a strong tradition of advancing science and innovation, focused on contributing to sustainable societal development.

We Take the Lead for a Sustainable Society

KTH shapes the future through education, research, and innovation. Situated in one of the world's most dynamic cities, Stockholm, we stand as a unifying international force to tackle global challenges such as climate change, future energy supply, urbanisation, and improving quality of life for a rapidly ageing population. We embrace diversity and attract talent worldwide. Together, we bring bold, creative, and responsible ideas to life, grounded in our commitment to academic freedom, openness, and transparency – fundamental pillars of democracy and the advancement of knowledge.

Founded in 1827, KTH is Sweden's largest and oldest technical university. We are a research-intensive institution, dedicating over two-thirds (67.2%) of our funding to research, with more than half (62%) coming from competitive external sources.

Our Vibrant community includes:

- 15,200 degree-seeking students (full-time equivalents), with over a third (34%) women
- Approximately 3,700 international students
- A total headcount of around 25,000 students
- 4,100 staff members (full-time equivalents), including 2,900 staff within research, including 368 professors and about 1,300 employed doctoral students and administration staff
- Over 175,000 alumni worldwide, with 20 international alumni associations

KTH's campuses are located in Greater Stockholm, Sweden. Each campus is strategically located close to key research and industrial hubs – for example, KTH Kista resides in one of the world's leading ICT clusters, while KTH Flemingsberg is part of Northern Europe's medical technology centre.

Our research spans natural sciences, all branches of engineering, architecture, industrial management, urban planning, history, philosophy, and more. Basic and applied research are conducted side-by-side, with interdisciplinary research integrated across specific fields. This versatile approach encourages innovative solutions to some of humanity's greatest challenges.

We are deeply engaged in collaborative efforts within five national strategic research areas, including ICT, molecular bioscience, transport, production, and e-science, with strong emphasis on climate-related research and sustainable development. Our projects address socio-technical transformations needed for a climate-neutral and resilient society.

KTH is also internationally connected through extensive partnerships and joint educational programmes across Europe, the U.S., Asia, Australia, and Africa. Sweden is a global leader in technological innovation, and Stockholm is consistently ranked among the world's top entrepreneurial and innovative cities. Being part of KTH means access to an expanding network of international companies and industrial communities.

Our educational programmes cultivate a new generation of engineers, architects, and leaders ready to meet the challenges of tomorrow. Through continuous impact assessment, KTH commits intellectual resources to develop new approaches addressing some of society's most critical challenges.

Sustainability at KTH

KTH is dedicated to Vision 2024–2028, Policy for Sustainable Development for KTH, Sustainability Objectives, and Management Plan. The KTH Sustainability

Office, consisting of seven specialists, works to integrate sustainability across education, research, and collaboration, while maintaining and improving KTH's ISO 14001:2015 certified environmental management system. The office collaborates both internally with KTH's Management, School Management, University Administration (UA) Management, and externally to drive and develop sustainability in accordance with KTH's university-wide sustainability and climate objectives, as well as national and international rules and regulations. By focusing on these priorities and leveraging its strengths in education, research, and innovation, KTH aims to prepare future professionals, contribute sustainable solutions to societal challenges, and lead by example.

University-Wide Sustainability Objectives

KTH has established Sustainability Objectives for 2021–2025 and Climate Objectives extending to 2045. These objectives focus on six critical areas: Education, Research, Collaboration, Integration and working methods, Resource Management, and Climate. During 2024, the work to formulate a new objective period for 2026–2030 began.

The results of the recent environmental and sustainability assessment show that KTH's activities in education, research, and collaboration have a significant environmental and sustainability impact by positively contributing to sustainable societal development. This means these areas should be the primary focus for establishing new sustainability and climate goals for the upcoming period 2026–2030. Sustainability and climate goals should also be set for the environmental impacts arising from KTH's own operations that support education, research, and collaboration.

Resource management, organisational structure and governance are also critical, as they form the foundation for environmental and sustainability work at KTH, encompassing leadership and staff engagement, work methods, and how activities are organised and implemented. Areas such as biodiversity, water use in buildings, and food service, have been reassessed; biodiversity and food service impacts are now considered significant. Water use remains monitored due to climate-change impacts.

Progress and Initiatives

KTH is making steady progress on its sustainability objectives across education, research, collaboration, and resource management. Notably:

- Education: Sustainable development is integrated into all programmes, with currently about 950 sustainably-related courses added over five years.
- Research: Sustainability is embedded across schools, with publications aligning to most UN Sustainable

Development Goals. Interdisciplinary funding supports innovative projects, though external funding challenges remain.
- Collaboration: national and international partnerships promote sustainable development outreach and visibility.
- Resource Management: Sustainability is increasingly integrated into governance and operations. Online sustainability training for staff is prioritised, alongside new governance structures to support these aims.

Challenges and Priorities

Key areas require intensified focus:
- Resource management needs stronger implementation, particularly reducing emissions from procurement and purchases, business travel and optimising waste practices.
- Current trends suggest difficulty reaching climate targets, demanding dedicated action plans.
- External sustainability research funding and sustainability-focused faculty positions require growth.
- Sustainability integration across all research disciplines has room for improvement.

To address these, KTH plans to:
- Promote climate-efficient meeting alternatives.
- Enhance data collection and analysis for accurate monitoring.
- Elevate resource management and climate indicators to the same importance level as financial KPIs throughout the organisation.

Integration of sustainability and resource management across KTH's structure must deepen, alongside refined systematic methods to track climate impacts. Challenges include balancing global collaborations with emissions reduction, managing resistance to travel policy changes, and safeguarding academic and research quality.

Through continuous assessment and stakeholder engagement, KTH is committed to advancing its sustainability goals and maintaining its leadership in sustainable development. For full reporting on KTH's sustainability objectives, see:

- Report to Swedish Environmental Protection Agency
- KTH Sustainability Objectives Report 2024
- The Environmental and Sustainability Assessment
- KTH's carbon footprint 2015, 2019 and 2022 according to the Greenhouse Gas Protocol (pdf 1.1 MB)

1. No Poverty

End poverty in all its forms, everywhere

KTH supports equitable access to education, recognised as a fundamental human right, by promoting inclusive opportunities for all students. Through dedicated funding programmes and international collaborations, we foster innovation and capacity building that help reduce poverty globally.

The Right to Education and Student Financial Support

KTH attracts students from many different backgrounds, and coming from a disadvantaged background should not be an obstacle to receiving an education at KTH. Students from Sweden and the EU are not required to pay tuition fees. For students required to pay tuition fees, there is a range of KTH and external scholarships available.

Students from Sweden can receive grants and loans while they study. The Swedish Board of Student Finance (CSN) is the government agency that manages Swedish student finance. For non-Swedish students there are different types of scholarships:

KTH Scholarships and Funds

The KTH Scholarship covers the full tuition fee of a one- or two-year Master's Programme. In order to receive a scholarship, the applicants are required to describe how an education at KTH will help them contribute to sustainable development.

28 students received the KTH Scholarship in 2024. In addition, 12 students received the KTH One-Year Scholarships, two students received the KTH Joint Programme Scholarships, and one student received the KTH India Scholarship.

All of the students are enrolled in programmes with the regular 2024 tuition fee (171,000 SEK/year) except for Architecture students (286,000 SEK/year) and Molecular Techniques and Life Sciences (200,000 SEK/year).

Student Field Study: (re)Made in Bangladesh

KTH actively supports student engagement in global development through initiatives such as KTH Field Studies, which provides travel grants for degree projects in low- and middle-income countries. An exemplary project by KTH Master's students Sean Meyer and Shimanto Goswami conducted a field study on textile recycling in Bangladesh, focusing on the challenges and opportunities within the fast-fashion industry. Their research, based in the village of Shaoil Bazar, where textile recycling is the primary livelihood, explored traditional handloom practices that recycle pre-consumer textile waste. This immersive study was awarded the Arwidssonstiftelsen Prize for best thesis in applied urban planning, and provided valuable insights into sustainable practices that support local communities and contribute to poverty reduction. Their work highlights how KTH's Field Studies programme enables students to engage in impactful research addressing global sustainability challenges.

The Kymmendö Model – A new housing model to overcome structural homelessness.

Today, large groups of households have difficulties entering the regular Swedish housing market, not least in the big cities. High housing prices, a reduced number of rental properties and difficulties in meeting the costs of new production are some of the factors singled out as complicating. These factors particularly affect socio-economically weak households and people without sufficient queue time. Stockholm City Mission acquired a propert, Kymmendö 4 with the aim of developing a scalable model for affordable housing in new construction. The plan is to apply differentiated rent and needs-oriented selection criteria. The aim of this project will set a good example and inspire other actors to contribute to a more socially sustainable housing supply. You can read more about the project and find the latest report here: Kymmendö project at KTH.

Erasmus+ Capacity Building Projects

KTH participates in Erasmus+ projects that support higher education systems in countries such as India, Botswana, Kenya, Tanzania, Ukraine, Azerbaijan, and various regions in Africa. These initiatives focus on building educational capacity to contribute to sustainable development and long-term poverty reduction.

Global Development Hub

KTH's GDH is a dedicated initiative that supports challenge-driven education and innovation in partnership with universities in Eastern and Southern Africa. Established in 2017, GDH fosters collaboration to address pressing societal challenges, such as poverty, sustainable energy, water access, and climate resilience, through locally relevant projects. The Hub provides professional development for educators and enables student exchanges, with approximately 10 KTH students annually participating in immersive, project-based education at partner universities, while an equivalent number of African students join KTH for challenge-driven learning experiences. GDH exemplifies KTH's commitment to international cooperation and capacity building that drives sustainable development and equitable growth in regions experiencing significant social and environmental challenges.

2. Zero Hunger

End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

Through research, operations and on-campus food services, KTH works with students, staff and food providers to support a fair and sustainable food system.

KTH FOOD Centre

KTH FOOD is an arena for collaboration, innovation, and transformation offering a leading research environment striving for a sustainable, resource-efficient, and fair food system that includes the entire value chain. This is something that results in food products with a positive impact on health and well-being. KTH FOOD has strengths and unique competences in research and educational activities focused on food systems. From farm to fork: production, processing, distribution, consumption and circular flows, KTH FOOD aims to contribute to research in the food science field in Sweden.

PLENTY – a Centre for Symbiotic and Circular Food Systems

Recent events like extreme weather, the COVID-19 pandemic, and geopolitical tensions have exposed vulnerabilities in Sweden's food supply chain. KTH leads the PLENTY research centre to tackle these challenges by developing circular and symbiotic food systems.

PLENTY focuses on better utilising food byproducts and resources to build a resilient and sustainable food supply. With strong partnerships across academia, industry, and society, and a budget of 85 million SEK, the centre advances Sweden's transition to a sustainable, competitive, and prepared food system aligned with the Sustainable Development Goals.

Centre for Future Seafood, Blue Food

Blue Food is a national seafood centre with the aim of developing Swedish sustainable production of seafood, and increasing accessibility for people throughout the country. A primary task is to utilise the wild fish catch more efficiently and to develop a modern aquaculture for fish, shellfish and algae in collaboration with about 70 partners.

Biotechnology Master's Programme

Biotechnology is a rapidly growing subject area that combines knowledge of organisms with technology to use cells in new ways. It is used, for example, for research on diseases, to create new materials and to develop crops that can withstand a changing climate. The biotechnology Master's Programme at KTH gives you knowledge that can revolutionise areas such as medicine, materials and food. The combination of biology and technology means new opportunities to solve challenges in health, the environment and how we can use nature's own processes for sustainable production of various products.

Sustainable Food Production

The course Sustainable Food Production and Consumption describes alternative food systems and their complexity in connection with the assessment of their sustainability, and demonstrates the "trade-offs" of sustainability between contrasting systems (i.e., local vs. global, extensive vs. intensive). Topics covered are agroecology, food and agriculture systems, nutritional cycles, effects on sustainability, life-cycle analysis, climate change, ecosystem services, biodiversity, effects of land and water use, food security and sovereignty, trade, and GMOs.

Analysing Business Models for Urban Farming: A KTH and IVL Collaborative Study

KTH, in collaboration with IVL Swedish Environmental Research Institute, has explored diverse business models for urban farming through a detailed study of 10 farms in Stockholm. The research reveals how urban farms pivot from competing on yield to offering technological expertise and societal services – key for scaling and economic viability. The projects highlight urban farming's potential to enhance food security, circularity, and resource efficiency in cities, contributing to sustainable urban development.

Procurement of Food and Food Services

KTH has a procedure for environmental requirements in purchasing and procurement. The routine states that the environmental impact of goods and services should be taken into account from a life cycle perspective, from the purchase of goods and services to the removal of returned products and waste.

To support colleagues in creating sustainable meetings and catering, KTH has Guidelines for Sustainable Events and Catering which include sustainable food choices.

One Planet Plate by Default at KTH

In 2023, the decision was made to implement the WWF Världsnaturfonden One Planet Plate standard for food ordered for meetings, events, and representation. This initiative aims to significantly reduce the university's climate footprint per meal, aligning with its sustainability goals.

The standard specifies that meals should generate a maximum of 0.5 kg of CO_2 equivalent emissions and require organic certification for certain ingredients. The initiative responds to requests from staff and students for more plant-based options and will lead to meals featuring increased vegetables, fruits, and legumes while allowing flexibility for individual dietary choices. The project focuses on changing current practices and procurement procedures while collaborating with suppliers of catering and WWF Sweden.

Sustainable, Healthy and Affordable Food Choices on Campus

THS (Tekniska Högskolans Studentkår) restaurants run by the Student Union offers affordable food for students and are not driven by profits. The ambition is to provide healthy and balanced meals where large portions of the ingredients are locally and sustainably sourced.

NoPEST No Toxic Presticides

In the FetOpen project NoPEST, novel pesticides for a sustainable agriculture were developed and evaluated for targeting plant pathogens in crop production. The consortium consists of KTH, four universities from Europe and Israel and the company Sipcam Oxon. We developed non-invasive disease monitoring technologies to apply precise amounts of novel peptide aptamers specific to oomycetes pathogens. NoPEST contributes to providing sustainable production of agricultural products with higher yields.

3. Good Health and Well-Being

Ensure healthy lives and promote well-being for all at all ages

KTH research and education within Life Science focuses on enhancing the scientific and technological progress in life science, health and care.

Education for Good Health and Well-Being at KTH

KTH offers a strong constellation of education that covers global challenges in the broader areas of health, environment, and materials. Among them are courses and programmes that address health and ageing populations, sustainable production and working life, food production, and clean water. Undergraduate programmes that contribute to good health and well-being include: Biotechnology and Medical technology.

Master's Programmes at KTH include: Macromolecular Materials, Medical Biotechnology, Medical Engineering, Molecular Science and Engineering, Molecular Techniques in Life Science, Polymer Technology, Sports Technology, Technology, Work and Health.

Empowering Future Leaders in Life Sciences for Global Health

KTH advances Good Health and Well-Being through cutting-edge research and education in life sciences, aiming to enhance scientific and technological progress in health and care. A prominent example is the Postdoctoral Programme Empowering Future Leaders in Life Sciences, conducted in collaboration with SciLifeLab and national partners. This programme fosters talent development in areas such as precision medicine, infectious disease research, and diagnostics, contributing significantly to improving health outcomes globally.

Medical Technology for a Sustainable World

The Medical Technology programme focuses on learning to promote understanding and solutions for several of the SDGs, especially the goal of Health and Well-being. Students also learn about economic and social aspects of technology, as well as ethical issues around technology and healthcare, so that they can ensure that care is organised in an economically and socially sustainable way. Upon completion, students have the necessary tools to begin a career that will contribute to the development of sustainable healthcare, both in Sweden and in other countries where the need is potentially even greater.

Science for Life Laboratory, SciLifeLab

SciLifeLab, Science for Life Laboratory, is an institution for the advancement of molecular biosciences in Sweden. Life science is a field of high strategic importance for Sweden, as it impacts the development of healthcare, industry, agriculture and our environment globally. SciLifeLab began in 2010 as a joint effort between four universities: KTH Royal Institute of Technology, Karolinska Institutet, Stockholm University and Uppsala University. Today, SciLifeLab supports research activities at all major Swedish universities. In addition to the academic projects, the research infrastructure has also provided services to health and medical care, and to industry.

Data-Driven Life Science (DDLS)

In data-driven life sciences, the DDLS initiative spans basic research in a variety of areas such as new drugs, spread of infection and infection biology, precision medicine and diagnostics, and cell and molecular biology. As a whole, the initiative will contribute to improving human quality of life and well-being, protecting biodiversity and creating a sustainable society. The initiative is coordinated by SciLifeLab, a collaboration between the four host universities Karolinska Institutet, KTH, Stockholm University and Uppsala University, of which KTH is principal.

Air Epistemologies: Practices of Ecopoetry in Ibero American Atmospheres

The "Air Epistemologies: Practices of Ecopoetry in Ibero American Atmospheres" project explores the interconnectedness of air and human health. Through the lens of ecopoetry, the project emphasises how air serves as a medium that links humans with each other and other organisms, particularly in the context of airborne health risks highlighted by the SARS Covid-19 pandemic. By raising awareness of aerial communities and the significance of breathing as a form of knowledge, the project fosters public consciousness about air quality and its impact on health.

EIT Health

EIT Health, a Master's Programme in innovative technology for a healthy living environment, started in the autumn of 2020. The programme is led by KTH in collaboration with five other universities. Within EIT Health, KTH has continued to coordinate the Behealsy Doctoral Programme.

Student Well-Being at KTH

Student well-being is essential for academic success and personal development. All students can face challenges such as stress, time constraints, and social adjustment during their studies, whether adapting to a new environment or managing the demands of academic life.

To support students' mental and physical health, KTH offers a range of services including individual counselling, health consultations, workshops, and group activities aimed at promoting well-being. Through Stockholm Student Health Services, students have access to nurses, psychologists, and counsellors who provide confidential support for issues such as stress, anxiety, and study-related challenges.

KTH encourages students to maintain a balance between their studies and personal well-being, fostering a supportive and inclusive environment that strengthens resilience throughout their education.

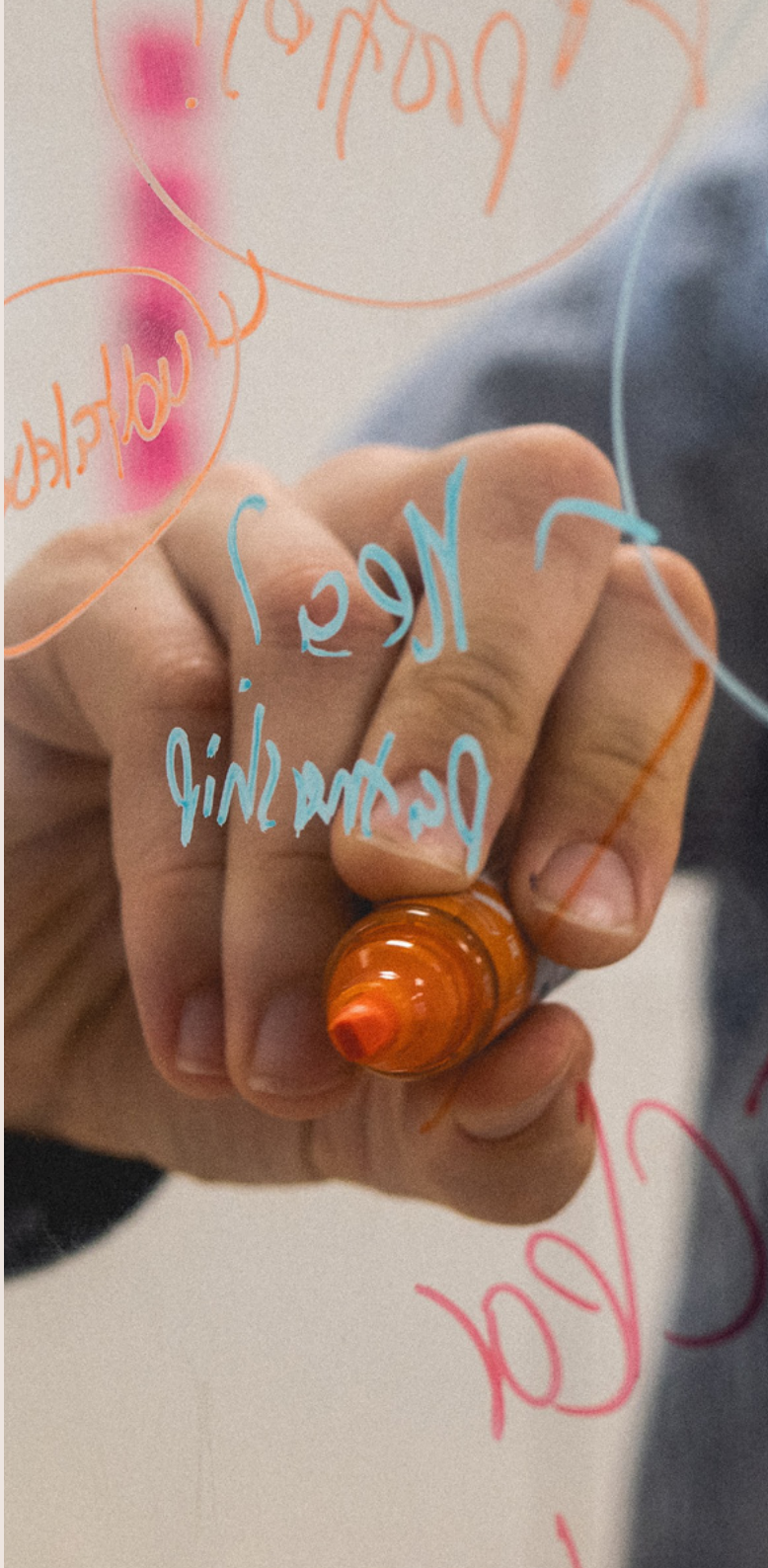
Working Environment and Wellness at KTH

KTH takes a holistic perspective on the work environment. At KTH, the term "work environment" means the physical, organisational and psychosocial work environment, as well as factors that actively contribute to the sustainable development of society. KTH regards healthcare and wellness as important issues, since good employee health means they are better prepared to meet the demands of working life. Your health is not only a personal affair, but also a shared resource, which is decisive for the organisation's performance. KTH offers all employees among other things: occupational healthcare, rehabilitation support, crisis support, and stress management. As an employer, KTH is legally required to supply vision aids, such as glasses if an employee has trouble with their vision. Furthermore, all employees are given a healthcare allowance to a maximum of 3,000 SEK per calendar year, as well as the right to exercise during paid working hours through the use of a weekly health and wellness hour.

4. Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

KTH's objective is that all students graduating from KTH have the competence to drive and contribute to the transition towards a safe, just, and sustainable world.



Integrating Sustainability Competence Across KTH Education

KTH's objective is that all students graduating from KTH have the competence to drive and contribute to the transition towards a safe, just, and sustainable world. KTH's steering documents determine that sustainable development must permeate all study programmes, and KTH's overall sustainability objectives include clear targets for education. Education is directly linked to the global target 4.7, which states that all students should receive sufficient knowledge of sustainable development, but above all, that teaching at KTH affects every one of the sustainable development goals. At KTH, our aim is to integrate sustainable development into all of our educational programmes, including doctoral programmes. The number of first cycle and second cycle study programmes focusing on the environment and sustainable development is the same as in recent years, with two Masters of Science in Engineering programmes, 10 master's programmes and one doctoral programme.

In 2024, 55% of announced teaching positions at KTH were linked to sustainable development – a 27 percentage point increase from the previous year – demonstrating our growing commitment to education for sustainability. Improved teacher competence in this area directly supports improved learning outcomes, empowering students with the knowledge, skills, and mindset needed for a sustainable future.

Education at KTH is designed to ensure that all students, regardless of programme, gain the necessary sustainability competences to meet future societal challenges and contribute meaningfully to global sustainable development.

The number of courses marked as related to the fields of the environment or sustainability has remained the same at over 980 courses. KTH uses the CDIO Standard for Sustainable Development as a tool to support programme managers and programme boards in developing and evaluating their education programmes with regards to integrating sustainable development.

KTH Quality System

KTH's Quality system promotes democratic values such as academic integrity and freedom, gender equality, sustainable development, and openness and collaboration with the outside world. KTH's quality work is characterised by efficiency and a system in which education, research and collaboration are followed up, reviewed and developed continuously.

Raising Visibility of Education and Sustainable Development at KTH

All students shall possess the knowledge and skills to drive sustainable societal development and contribute to the transition to an equal and climate neutral society. Above all, the teaching at KTH shall address all of the Sustainable Development Goals. To highlight how programme content is connected to the SDGs, information has been included in all programme descriptions regarding how the programmes relate to the Sustainable Development Goals. There are also programmes that have specific focus on sustainable development.

Meeting Future Competence Needs through Collaboration

KTH actively collaborates with industry partners to ensure education remains relevant and responsive to future skills demands. This partnership approach supports the development of innovative curricula and training programmes tailored to evolving technological and societal challenges. By integrating real-world industrial insights and fostering strong linkages between academia and business, KTH prepares students with the competences required for sustainable development and future industries. These efforts contribute to inclusive, equitable, and high-quality education, equipping graduates to drive innovation and societal progress.

Through continuous dialogue and cooperation with industry, KTH is strengthening lifelong learning opportunities and expanding pathways for sustainable careers.

Sustainable Leadership with Lean Life-long Learning

The KTH Leancentrum is a competence centre for sustainable business development offering training, seminars

and coaching for both business and the public sector.

Courses include Lean & Green, Sustainable Leadership with Lean, Sustainability in Practice and Sustainable Transport Systems.

KTH Global Development Hub

KTH Global Development Hub, GDH, supports the development of challenge-driven education within KTH and partner universities in Eastern and Southern Africa. challenge-driven education is mainly used in project courses where students work with solutions to locally formulated societal challenges related to the UN's Sustainability Goals.

STEM and Education for Sustainable Development

The KTH Department of Learning in STEM works with various aspects of education for sustainable development and education leadership, for example through research and development, and by educating, supporting and collaborating with teachers and education programme directors

Vetenskapens Hus / The House of Science

Each year, about 80,000 school students and teachers pass through the House of Science each year, which has the purpose of inspiring and creating interest and knowledge in an environment that demonstrates science, technology and mathematics. Within the theme of environment and sustainability, there are several different scchool programmes for different ages, where both biology and chemistry, as well as technology, are used. Supervised activities for students include building and measuring Grätzel solar cells, working with wind turbine models and thinking about raw materials and products and how to reuse and recycle them. Other activities also address the issue of how food choices affect the environment. The House of Science is a centre jointly owned by KTH and Stockholm University.

Pedagogical – Development Skills for Teaching Sustainable Development

To ensure quality education for our students, KTH trains the teachers for teaching sustainable development. The pedagogical development course Learning for Sustainable Development (4.5 credits) has the aim of giving the teachers tools to, based on their own subject area, integrate ideas and issues around sustainable development. In addition to this course, sustainable development is covered in the following higher education pedagogical courses:

- Leading Educational Development (3 credits)
- Gender Theory and Gender Equality in Technical Higher Education (4.5 credits)
- Teaching and Learning for Challenge Driven Education in a Global Context (3 credits)
- Global Competence for Teachers in Higher Education (3 credits)

Environmental Courses and Study Programmes for Employees

KTH's employees and people who work on assignment for KTH, must have adequate knowledge to perform their work duties in a manner consistent with KTH's work with environment and sustainable development. KTH offers environment and sustainability related courses and study programmes for employees and contractors, such as basic online training on sustainability for employees, workshops during leadership training, as well as lab and chemical training.

5. Gender Equality

Achieve gender equality and empower all women and girls

KTH values are based on democracy, equal value of persons, human rights and freedoms and free and open discussion. Equality between women and men and distancing oneself from all forms of discrimination are both an issues of quality and an obvious part of KTH's values. Gender equality and diversity among employees and students are also important resources for KTH.

Governance at KTH – KTH Equality Office

KTH's work for gender equality, diversity and equal conditions (JML) is led by the President with support from the KTH Equality Office, which is a permanent unit whose function is to coordinate and support KTH's overall work with gender equality, diversity, and equal conditions.

KTH, like all Swedish universities, has two main assignments regarding gender equality, diversity and equal conditions. The first is based on the Discrimination Act and the seven protected grounds for discrimination. The second is a government mission on gender mainstreaming in institutions of higher education, where universities and colleges must integrate gender equality in their organisation and activities. The government's Gender Equality Policy goals also constitute an external framework for this assignment, to which KTH must contribute its organised work for increased gender equality. The goal of gender equality policy is that women and men should have the same power to shape society and their own lives.

KTH organises its work with gender equality, diversity and equal conditions through a JML plan with four prioritised areas: collective organisation, knowledge and awareness, equal opportunities, and inclusive cultures.

Integration of JML into the SDGs

Since 2021, JML has been integrated into KTH's Sustainability Objectives. The plan makes it clear that gender equality, diversity and equal conditions are integrated into sustainability work at KTH.

Gender Equality in Education at KTH

Gender equality, diversity and equal conditions (JML) are to be integrated into all educational programmes at KTH in three aspects: content, design and implementation.

All programmes need to have a plan for when and how the mandatory JML content is to be integrated. Different forms of support are offered by KTH to the programmes, from a dedicated course in higher education pedagogy to materials that can be used in educational activities. These include introductory academic texts and films on several topics that were added to the Necessity Bag, an online resource for JML integration.

InspireLab: Catalysing Technology and Innovation for Gender Equality at KTH

InspireLab is a newly established centre at KTH dedicated to using technology and innovation to strengthen gender equality in society. By funding cutting-edge research projects, InspireLab tackles concrete equality challenges affecting women's health, safety, and representation, such as preventing birth injuries, combating deepfake pornography, and developing AI systems that better reflect diverse women's experiences.

Beyond research funding, InspireLab promotes broad knowledge dissemination, organises doctoral schools, and integrates gender equality themes into KTH's education and future research. The centre aligns closely with KTH's ongoing commitment to equality, diversity, and inclusion, aiming to embed these values throughout the university. By addressing gender-based issues through technology and innovation, InspireLab fosters a more sustainable, equitable society.

The Research and Collaboration Programme on Gender-Based Violence

KTH, alongside Karolinska Institutet and Malmö University, initiated a research and collaboration programme intended to combat sexual harassment and gender-based violence. The goal was to establish research-based knowledge about inclusive working and study environments as well as a sustainable organisation for the prevention of sexual harassment and gender-based vulnerability in the academic world. The programme helped strengthen and intensify the work on the university's organisational culture, with a focus on quality, sustainable development, working environment, leadership, gender equality and equal conditions. The programme included a national study regarding the prevalence of sexual harassment throughout the Swedish higher education sector, the development of new research-based knowledge about sexual harassment, as well as the development of common platforms for research collaborations and the process of change.

A report on the results for KTH from the national study was written during 2023 and published at the beginning of 2024. The report includes, besides KTH's results, a short overview of research on sexual harassment and

incivility, as well as group work material to process the results in smaller groups.

Equal Opportunities at KTH

This project includes various initiatives intended to create equal opportunities in terms of salary, power and career. One example is the continued work on faculty development from a gender equality and diversity perspective. KTH needs to have equal processes with respect to recruitment, assessment and employment, as well as the conditions for equal resource allocation. The FFA group (responsible for future faculty) has worked from an early stage on faculty regeneration with a focus on gender mainstreaming. The members of the group are comprised of Deputy Heads of Schools or Heads of Schools from all the Schools, and are headed by the Dean.

Leading Educational Development

The course Leading Educational Development, which is gender integrated, is offered each year. A course in higher education teaching, Gender Theory and Gender Equality in Technical Higher Education, has been conducted yearly since 2019. This course is important in the development work for increased gender awareness in all of KTH's courses.

The participating teachers acquire knowledge in the field of gender and education, as well as theoretical scientific knowledge that will help them in their own work regarding course arrangements. Gender research from various parts of KTH has also been included in the course. The examination contains elements where the teachers have to apply the new knowledge in analyses of their own courses.

Course in Gender and Technology

Since 2018, the Gender and Technology course has been offered by the Department of Philosophy and History. The course is a social, cultural, philosophical, and historical investigation of gender and technology. Drawing on feminist Science and Technology Studies (STS) and feminist Media Studies, the course provides critical perspectives on connections between gender and technology.

Student organisations at KTH play a vital role in promoting gender equality and inclusion on campus. Groups such as Malvina, which supports female and non-binary students, host events that combine personal development with professional networking, helping to build strong, empowering communities. Speqtrum provides a safe and inclusive space for LGBTQ+ students and allies, fostering diversity and acceptance. These organisations organise workshops, lectures, and social activities that raise awareness and inspire action toward equality.By actively engaging in dialogue, leadership, and inclusion initiatives, these groups contribute to a more inclusive university environment.

6. Clean Water and Sanitation

Ensure availability and sustainable management of water and sanitation for all

Through research and education in engineering, environmental science and public health, KTH supports the development of knowledge and skills to achieve clean water and sanitation for all.

WaterCentre@KTH

The WaterCentre@KTH is a wide cross-disciplinary collaborative effort based at KTH Royal Institute of Technology. The centre's mission is to bring about water innovations for a sustainable future. The centre believes in the meeting of experts, practitioners, and policymakers. It connects scientists and offers an arena for joint knowledge creation with industry, government and civil society. Several researchers and research projects are related to climate adaptation and climate risks, including rising sea levels and flood risk management, working together with municipalities in Sweden and abroad. One example is the project "Robust Decisions for Managing Climate Risk in Sweden", which is done in cooperation with several municipalities and counties, and is funded by the Swedish Civil Contingencies Agency.

Decision-making in Critical Societal Infrastructures

The Decision-making in Critical Societal Infrastructures (DEMOCRITUS) project develops methods for monitoring and controlling large-scale infrastructures with the help of digitalisation. The project designs new methods for learning over large datasets, proposes networking solutions that support monitoring, learning and control, and constructs data-driven models of the monitored physical processes. As an application, Democritus focuses on water distribution systems, which exhibit many unsolved challenges for future societal systems. We study real-time leak detection, detection and mitigation of possible contamination or attacks, global decision-making while observing local data privacy, and the efficient utilisation of smart meters.

PUDDLE JUMP

The Puddle Jump project advances sustainable water management through nature-based solutions, focusing on small artificial water bodies (ponds and wetlands) that regulate water flow and improve retention. This mitigates floods and droughts while protecting and restoring vital water-related ecosystems essential for water purification and freshwater supply. The project promotes holistic water governance aligned with EU Water Framework and Floods Directives, encouraging integrated management approaches at multiple governance levels. Public engagement is enhanced through citizen science initiatives that raise awareness of the ecosystem services these water bodies provide. By addressing water quality, efficient use, and ecosystem protection, Puddle Jump makes a significant contribution to achieving clean and sustainable water management.

Cavitating Microbubbles as a Next-Generation Water Cleaning Technology for PFAS Removal

The removal of micropollutants, such as polyfluoroalkyl substances (PFAS), commonly known as 'forever chemicals,' from water is a critical and challenging issue that remains unresolved globally. This case, which has received support from KTH Innovation, provides a chemical-free solution with low energy consumption and CO2 emissions, relying solely on the energy released by the collapse of cavitating microbubbles.

Environmental Engineering and Sustainable Infrastructure Master's Programme

Our society has major challenges in managing a changing climate and developing and securing good water quality. The Master's Programme in Environmental Engineering and Sustainable Infrastructure offers seven different competence profiles, including: Water Technology; Environmental Geotechnology and Hydrogeology; Water and Wastewater Technology; Environmental Information Analysis and Management; Sustainable Infrastructure and Environmental Systems Analysis; Sustainable Societies. There are individual courses within the programme focusing on water technology and wastewater engineering such as "Water and Wastewater Handling" which describe different systems for the handling and distribution of water and wastewater, criteria for evaluation, and principles and fundamentals of biological, chemical and separation methods. Study visits at plants for wastewater treatment and water treatment are included in this course.

Industrial and Environmental Biotechnology Programme

The biotechnology sector is considered to be one of the main players in the development of a sustainable society, and able to tackle current and future societal challenges. The Master's Programme in Industrial and Environmental Biotechnology prepares students for careers focusing on the development of more effective and environmentally friendly production of commodities. The programme provides knowledge and understanding about how biological processes and cellular components are used to create new technologies, industrial processes, and biotechnological products. Knowledge is acquired on how microorganisms are orchestrated to remove contaminants from water and soil or to produce biomolecules that

can serve as raw materials. Microorganisms are used to design and create effective and sustainable production of products from food ingredients to detergents, paper, and textiles. Sustainability is a key aspect that features in all areas of biotechnology and that continuously combines science and technology to improve, simplify, or streamline industrial manufacturing of products or services.

Muddy Terrains of Environmental Expertise

Muddy Terrains is an ethnographic research project at KTH exploring how knowledge about wetland restoration evolves and competes in a changing climate. By examining the complex interplay of expertise, practices, and governance around ecosystem services, the project supports SDG 6 by advancing understanding and implementation of sustainable water and wetland management solutions in Sweden and beyond.

LEGACY: Uncovering Hidden Groundwater Pollution Impacting Europe's Coastal Waters

The LEGACY project addresses long-term groundwater pollution and its impact on European coastal water quality via submarine groundwater discharge (SGD). Using innovative tracer techniques, advanced modelling, and interdisciplinary approaches, the project quantifies pollution transport at a continental scale and predicts future changes under climate and land-use shifts. This research fills critical knowledge gaps to improve pollutant budgets and supports effective water quality management and legislation.

NEEDED Biochemicals from Wastewater a Game Changer

The NEEDED project aims to use engineered microorganisms to convert organic matter in wastewater into high-value biochemicals. By advancing biorefinery concepts and circular resource management, the project supports SDG 6 through improved water quality, efficient wastewater treatment, and sustainable production of valuable chemicals for a circular urban future.

Albano Campus Water Systems

In Stockholm, a cohesive university area extends from Stockholm University in the north, via KTH over to Hagastaden with Karolinska Institutet in the west. The Albano campus is a modern and competitive university environment in harmony with nature and with the goal of being a role model in sustainable urban development. Several sustainability efforts include the creation of new water systems to utilise stormwater and improve the microclimate, and outdoor environments that are designed to strengthen the distribution routes for plants and animals. The project is a collaboration between Akademiska Hus, Stockholm University, KTH, Svenska Bostäder and the City of Stockholm.

7. Affordable and Clean Energy

Ensure access to affordable, reliable, sustainable and modern energy

Research and education at KTH in the field of Energy Science and Engineering aim to gain new knowledge, and to develop technologies and systems that will allow the implementation of a sustainable global energy system with respect to both natural resources and the environment. KTH offers 23 energy programmes including three master's programmes. Energy research is conducted in a number of KTH schools, programmes and specialised research centres.

Electric Power Engineering Master's Programme

Electric Power Engineering Master's Programme addresses the global demand for affordable and sustainable resources that has created a large need for electrical engineers and researchers to provide electricity and to build new smart solutions that enable a more sustainable energy management. Electric power is one of the key areas for achieving our sustainability goals. One illustration of this is that a reduction in emissions and energy consumption often results in more demands and more utilisation of electric power, typically when changing from fossil to electric power. The first year of the programme includes technology complementary courses that provide environmental, societal, and philosophical perspectives to electric power engineering. The Master's programme in Electric Power Engineering covers the following areas: modelling of electrotechnical equipment, power electronics, electrical machines, power system operation and control, power system planning and electricity markets, and management in power systems.

Sustainable Energy Engineering Master's Programme

The Master's programme in Sustainable Energy Engineering provides state-of-the-art education in the fields of solar energy, power generation, energy utilisation, and transformation of energy systems. Also, crosscutting and interdisciplinary challenges address multiple impacts, such as land use and climate change in an integrated, holistic approach. After completion of the programme, students will have a broad knowledge of energy engineering, and have acquired skills in managing complex problems, considering life cycle perspective. The aim is to educate leaders and developers for future innovation in energy.

Open-Access Course on Clean Cooking Access Modelling

OnStove, the revolutionary geospatial clean cooking tool developed by the division of Energy Systems (dES) at KTH, has released an open-access course. The course, "Geospatial Clean Cooking Access Modelling using OnStove" is set to empower ministries, non-governmental organisations, academia, and individuals with the knowledge and skills to drive clean cooking access in their regions.

The Sustainable Power Laboratory

The Sustainable Power Laboratory (SPL) enables world-class research into technologies needed for the transition to a decarbonised energy system with radically reduced environmental impact. Research is carried out on all levels, from materials characterisation to power system dynamics. The lab consists of nine different facilities.

Turnkey Solution for Swedish Building through Integrated PV Electricity and energy Storage (PV-ESS)

The PV-ESS project at KTH develops turnkey solar photovoltaic (PV) and energy storage solutions tailored for Swedish buildings. By integrating solar PV systems with advanced battery storage, this initiative aims to increase solar self-consumption, reduce electricity costs,

and enhance grid flexibility. Conducted at KTH's Live-In Labs, the project combines techno-economic analyses with real-world demonstrations to identify sustainable business models and innovative control strategies. This research directly contributes to SDG 7 by promoting affordable, reliable, and clean energy solutions for the built environment.

Circular Techno-Economic Analysis of Energy Storage Project

KTH leads the Circular Techno-Economic Analysis of Energy Storage project in cooperation with the International Energy Agency (IEA) Annex. This research develops open-source tools and methodologies to evaluate the technical performance, economic feasibility, and circular economy potential of diverse energy storage technologies, including electrical, thermal, and chemical storage systems. By addressing key barriers like investment uncertainties, and enabling sustainable business models, the project promotes wider deployment of clean and efficient energy storage solutions. This work supports SDG 7 by advancing affordable, reliable, and sustainable energy access through enhanced energy shifting, peak shaving, and renewable integration in energy systems.

Semi-Transparent Photovoltaics as "Solar Windows"

In this project we develop a new concept for a smart solar cell window. It is a semi-transparent photovoltaic layer, which dynamically regulates transmittance of visible and near-infrared light with a photochromic coating. Thus, it saves energy for cooling, and produces electricity in buildings towards the goal of "zero-energy" buildings. The technology can be used as a window or facade and is in demand by the construction, real estate, architectural and glass industries.

PARMENIDES: A Humanised Electricity Grid

The PARMENIDES project aims to develop a human-centered energy management system (EMS) tailored to hybrid energy storage systems in energy communities. By integrating multiple energy storage technologies with insights into human behavior, this project seeks to optimise energy supply, usage, and storage to create a more flexible and resilient electricity grid across the EU. The research addresses challenges posed by renewable energy intermittency while ensuring stable energy prices and reducing network congestion. This holistic approach supports the transition to clean, reliable, and affordable energy.

Renewable Energy and Energy Efficiency in Facilities on Campus

Reduced energy consumption is important in order to ensure efficiency and to contribute to a climate neutral society, in accordance with KTH's sustainability policy and KTH's sustainability and climate goals for sustainable buildings.

In 2024, KTH's energy use decreased by 2 percent per annual workforce (from 17,800 kWh to 17,400 kWh), 7 percent per full-year student (from 5,000 kWh to 4,700 kWh) but increased by 5 percent (from 235 kWh to 248 kWh) per square metre (base year 2015). Total enegy use (electricity, heating, cooling, operational energy) has increased by 12 percent compared to 2023 (from approximately 63,900 kWh to 71,700 kWh). Actions implemented are: Solar panels, heat recovery,

windows with energy glass, energy savings transition from desktop to laptop computers, and continual operational optimisation. Measures have been implemented at PDC, estimated to reduce energy consumption by between 130,000 and 175,000 kWh per year, and the closure of buildings during breaks. The deviations identified during an energy patrol at KTH Campus in 2023 have been addressed during the year. Relevant new buildings and conversions include requirements regarding renewable energy and energy efficiency.

KTH's property owners on all campuses comply with the construction industry's building rules and follow Swedish legislation regarding energy declarations. Property owner, Akademiska Hus, has continued implementing energy-saving measures proposed by students during their thesis projects. Examples include introducing system support to detect anomalies in cooling during winter, launching a pilot project to lower temperatures at night and on weekends, and upgrading lighting systems. Further sensor work is ongoing to identify and address lighting irregularities and energy mapping. KTH works in continual dialogue with employees, students and with property owners to improve energy efficiency. Akademiska Hus also has a sustainability goal of halving the amount of energy purchased between 2000 and 2025. In addition, Akademiska Hus has the following climate targets:

- Achieve net-zero emissions by 2040
- To reduce emissions by 65% 2030 compared to base year of 2019.

8. Decent Work and Economic Growth

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

KTH takes a holistic perspective on the work environment. At KTH, the term ‘work environment’ means both the physical and psychosocial work environment, as well as factors that actively contribute to the sustainable development of society. As a government agency, KTH follows the Swedish regulations that exist in the working environment. These national rules are translated into steering documents within KTH.

The Department of Industrial Economics and Organisation (INDEK)

The Department of Industrial Economics and Organisation (INDEK) is the intersection of management and economics, technology and science at KTH. INDEK addresses SDG 8 by investigating the future of work and reskilling approaches as well as policy-oriented research related to the policy of innovation and growth.

The department is organised into three units:

- Management & Technology (MT)
- Sustainability, Industrial Dynamics and Entrepreneurship (SIDE)
- Accounting, Finance, Economics and Organisation (AFC)

Technology, Work and Health Master's Programme

Functional and well-designed work systems, organisations and work environments are essential for a healthy and productive working life, and professionals with knowledge in proactive occupational safety and health management play a vital role. In the Technology, Work and Health Programme, students learn how to plan, design and analyse work environments, from the perspectives of sustainable work and organisational performance. Work is an integral part of peoples' lives and an essential determinant of health.

Good health and well-being. Work-related accidents and diseases are common in all countries, and students in this programme gain a broad understanding of workers' health: that of blue and white-collar workers, of all genders, ages and socioeconomic classes.

Work Environment at KTH

Work environment means all factors, physical, organisational and psychosocial, that affect employees and students at KTH, such as attitudes, leadership, behaviour towards each other, premises, equipment, furnishings, chemical products, working methods, work organisation, cooperation, social interaction and the possibility of recovery and personal development.

Employee Benefits at KTH

KTH offers wellness subsidies, preventive healthcare, parental compensation, flexible working hours, and various social activities to promote a healthy, inclusive, and sustainable work environment. These initiatives contribute to employee well-being and decent working conditions.

KTH Career Services and Industry Connections

KTH supports students with career planning, development seminars, and job applications to help foster productive employment outcomes. Over 50% of students secure their first job before graduating, many through degree projects with companies like Ericsson, SAAB, and Scania. This close academia-industry collaboration strengthens pathways to full and decent employment for graduates.

Job Vacancies and Research Positions at KTH

KTH regularly offers numerous research, teaching, and administrative positions contributing to an inclusive and sustainable employment environment. These promote decent work by fostering a positive work environment and growth opportunities for academic and support staff.

Clearer Academic Career System Proposal

A recent KTH report proposes new academic career paths and promotions to create a competitive, transparent, and secure work environment. This supports sustainable work conditions and professional growth aligned with SDG 8's goals for decent work.

Trade Unions

There are three trade unions at KTH that support KTH staff and faculty to monitor their interests in the workplace and assist with negotiations and contact with the employer. The union representatives elected at the annual meeting also work in general bodies where various issues are discussed. This can apply to the work environment, gender equality, collaboration, local agreements and more.

Preventing Discrimination in the Workplace

Discrimination in the workplace is forbidden according to Swedish law, and KTH follows Swedish legislation. This area is a very important and prioritised part of KTH's work within work environment. KTH has several steering documents that address working environments:

- HR policy
- Guidelines on gender equality, diversity and equal opportunities
- Code of Conduct for employees and fellow workers
- Administrative procedure for cases of discrimination harassment sexual harassment and victimisation

9. Industry, Innovation and Infrastructure

Build resilient infrastructure, promote sustainable industrialisation and foster innovation

Investment and the development of infrastructure within transport, irrigation, energy, information and communication are key for the achievement of the Sustainable Development Goals. The development of knowledge and skills within technology and innovation at KTH, often in collaboration with industry, supports sustainable development, including economic growth, social inclusion and environmental balance.

Industrial Technology and Sustainability Programme

The programme Industrial Technology and Sustainability teaches students to understand and develop solutions for several of the SDGs, including the goals of Sustainable Industry, Innovations and Infrastructure as well as Sustainable Consumption and Production and Decent Working Conditions and Economic Growth. Students learn about sustainability from an industrial perspective, for the environment, work and competitiveness. The students learn and receive instruction in communication, argumentation, debates and negotiation, for example about which sustainability aspects a business should measure or debate about future technology and work in industry. These skills are crucial for collaboration and required for solving complex problems.

Entrepreneurship and Innovation Management Master's Programme

The Master's Programme in Entrepreneurship and Innovation Management is designed to give students a focused, relevant and useable body of knowledge in this diverse and modern field. The programme is ideally suited for those with an interest in starting and managing innovative projects or new economic endeavours. The programme helps to improve employment opportunities, particularly for young people who have business ideas, by teaching and coaching students in creativity, innovation, entrepreneurship and how to identify business opportunities. To promote sustainable industrialisation, this programme provides knowledge in the field of industrial dynamics with an emphasis on innovation and entrepreneurship aimed towards technical creativity. Moreover, students will get an opportunity to learn about the responsible consumption of natural resources and production by the application of creative ideas, entrepreneurial approaches and innovative management.

Sustainable Digitalisation Master's Programme

KTH integrates sustainable development throughout all its study programmes to equip students with the knowledge and skills needed for sustainable industrialisation and resilient infrastructure. Programmes such as the Master's Programme in Sustainable Digitalisation prepare students to design digital systems with low environmental impact and lead systemic transformation towards sustainability. Students learn methodologies like life cycle assessment (LCA) and digital innovation applied to real-world sustainability challenges, fostering leadership in industry and infrastructure aligned with SDG 9. This multidisciplinary educational approach ensures graduates are well-prepared to contribute actively to building sustainable industries and infrastructure.

AI Sustainability Centre (AISC)

The AI Sustainability Centre was established with the purpose of creating a new and just approach to AI. A multidisciplinary and research-focused approach that considers both the positive and negative impacts on people and society at the same level as commercial benefits or other efficiency gains. The Centre calls it Sustainable AI. More frequent cases of unintended discrimination, faulty decisions and recommendations, as well as privacy intrusion, increase the demand for explanation models and ability to govern AI in a more responsible way. Today, AI is integrated without prerequisites for identifying,

measuring and evaluating the implications from a social, juridical and ethical perspective.

Production Angels

Production Angels supports startups with sustainable and innovative products to scale up from prototype to production. Production Angels' mission is to promote production in Sweden and is aimed at the industrialisation and scaling up of startup companies with hardware products, the phase often called the "valley of death". Through situation-based coaching by production experts, training materials, and matching with manufacturers, Swedish startups with sustainable innovations are supported to approach a production phase with local manufacturers.

KTH Innovation

In 2024, KTH Innovation continued supporting a high number of ideas aimed at contributing to sustainable development. Around 85% of all ideas supported by KTH Innovation in 2024 had the ambition of contributing to sustainable development. Sustainability aspects were further implemented in business coaching using the KTH Innovation Readiness Level™ model. The model, which is available under a creative commons licence, has now been downloaded by over 4,000 organisations. The model enables KTH to spread our process-oriented approach to innovation around the globe. Other activities included organising an ideation workshop focusing on innovations for a more sustainable beauty industry and highlighting several KTH startups working to decrease emissions and waste. KTH Innovation also places special focus on energy innovation in Sustainable Energy Action, a project funded by the Swedish Energy Agency, and in an event facilitating meetings between industry and energy startups.

The Global Change Award: Accelerating a Decarbonised Textile Industry

The Global Change Award is an innovation challenge initiated by H&M Foundation aiming to accelerate early-stage innovation to support the textile industry in halving its greenhouse gas emissions every decade. The Award, run by the H&M Foundation in collaboration with KTH Innovation, Accenture, and The Mills Fabrica, supports early-stage innovation across four areas in the textile industry; Sustainable Materials and Processes, Responsible Production, Mindful Consumption, and Wildcards. These areas are based on our mapping into greenhouse gas emissions across the textile value chain – combined with insights from systems thinking, which shows how complex and interconnected the industry's challenges really are. Each year, 10 innovators receive grants and access to the year-long programme, which combines innovation support, mentorship, and systems designed to equip them to scale solutions benefitting both people and the planet.

Caplyzer

KTH spin-off Caplyzer develops breakthrough electrolyser technology for safer, cheaper, and scalable green hydrogen production. By decoupling hydrogen and oxygen generation, their system eliminates explosion risks and costly membranes, while avoiding rare earth metals. Caplyzer aims to drive industrial decarbonisation and accelerate the global transition to sustainable energy.

HECTAPUS

The HECTAPUS project at KTH pioneers innovative heating and cooling solutions by integrating Phase Change

Materials with underground thermal energy storage and heat pump technologies. This approach enables cost-effective, energy-efficient, and versatile thermal energy management that supports the transition to renewable heating and cooling systems. By enhancing energy storage capabilities and optimising system performance across different climates, HECTAPUS contributes directly to building resilient infrastructure and promoting sustainable industrialisation.

ReCreate: Pioneering Circular Economy Innovation in Concrete Construction

ReCreate is a 5-year EU-funded project across four countries with academic and industry partners, focused on closing the loop for concrete reuse – the world's most used and carbon-intensive building material (accounting for 8% of global CO2 emissions). The project pioneers systemic innovation in the construction industry by developing circular economy solutions that enable the deconstruction and reuse of precast concrete components. By reducing reliance on virgin materials and minimising the environmental footprint of construction activities, ReCreate fosters resilient infrastructure. It advances technology, logistics, quality assurance, and regulatory frameworks to promote sustainable industrialisation and transformative innovation.

Center for X-Rays in Swedish Material Science (CeXS)

The transition to sustainable energy and industrial systems requires a greater insight into materials and development. Such material development is also important to the sustained competitiveness of Swedish industry. Sweden's investments in a material science beamline at PETRA III in Hamburg, Germany, enables contributions to sustainable development goals via experiments into the behaviour and characteristics of materials as they are being produced and used. Setting the research direction and governing the Swedish materials beamline are key duties of the Center for XRays in Swedish Material Science (CeXS), which KTH is responsible for.

10. Reduced Inequalities

Reduce inequality within and among countries

Democracy, the equal value of all human beings, human rights and freedom, and free and open discussion are part of KTH's core values. KTH works to reduce discrimination and to promote equality and diversity at KTH and in society, through research, education and operations.

Scholars at Risk (SAR)

Scholars at Risk (SAR) is an international network dedicated to promoting and protecting academic freedom. The network gives sanctuary to scholars who are unable to work in their home countries by arranging temporary research and teaching positions at institutions in the network.

KTH is also part of the project InSPIREurope via Gothenburg University. The project is funded by the Horizon 2020 action Marie Skłodowska-Curie and is coordinated by SAR Europe. It aims to forge a coordinated, cross sectoral, Europe-wide alliance for researchers at risk.

Real Estate and Construction Management

The Department of Real Estate and Construction Management has social sustainability as one focus aspect in its research. The main focus areas related to social sustainability are:

- housing owners' strategies for building social sustainability (rental policies, owner incentives, financial viability from a societal point of view)
- conversion of rental apartments to housing cooperatives and private ownership in low-income areas
- including legal aspects, feasibility, integration, prices and neighbourhood effects
- sustainable renovation strategies in 1960s housing areas
- urban development work in a segregated city with filtered housing areas
- municipal housing social programmes; effects of rental policies on discrimination and segregation
- gender aspects in real estate management (collaboration with Malmö University).

Sustainable Urban Planning and Design

The Master's Programme in Sustainable Urban Planning and Design focuses on the interrelationship between the built environment and social, economic and institutional forces. The programme develops professionals with a profound and broad understanding of the multiple factors in sustainable urban development. Students are trained to alter planning and design practices to respond to the environmental conditions and societal needs of the future.

Equity and equality are core qualities of sustainable societies, involving, for example, equal access to housing, public services and transport systems. The causes and consequences of inequality are analysed in courses such as Introduction to Urban Economics and Planning Theory and Urban Governance, and students will learn to address equality issues in urban planning and design in project courses.

Global Development and Political Ecology

The course Global Development and Political Ecology develops a critical framework for understanding uneven development including social justice and environmental change, with a special focus on tracing global commodity chains and the rapid urbanisation of the global South.

The course is fundamental for further studies in critical environmental research, sustainable development, and development studies.

PhD Impact: Advancing Inclusion and Reducing Inequalities in Academia at KTH

PhD Impact is an independent, cross-departmental initiative led by KTH staff, professors, and PhD students aiming to foster an inclusive and welcoming environment within academia. By creating safe spaces for open dialogues around gender, power, and structural inequalities, PhD Impact promotes meaningful cultural change and empowers individuals across all career stages.

The initiative offers workshops addressing discrimination, harassment, and inclusion, equipping doctoral students and staff with the knowledge and tools needed to recognise and counteract systemic inequalities. Its vision is a diverse, equal, and supportive academic community where every voice is heard and valued.

PhD Impact actively works to dismantle barriers and foster fairness and inclusion throughout KTH's academic environment.

Student organisation for Reduced Inequalities

Bright at KTH works to create inclusive spaces that increase diversity and foster a sense of belonging for all students, regardless of background. This contributes directly to SDG 10 by addressing social inclusion and equal opportunities within the university community. Through such efforts, KTH supports building an equitable environment that empowers marginalised groups and promotes integration.

Measures against Discrimination

KTH is an administrative authority. As such, the basic provisions for the employment of teachers and students are prescribed in the legal regulations for central government sector employment and in general labour law legislation. According to the Instrument of Government (1974:152), administrative authorities shall take into account everyone's equality under the law and shall observe objectivity and impartiality. The law also states that central government sector appointments shall be based on reasonable grounds such as length of service and expertise. Additional provisions are found in the Public Employment Act (1994:260) and in the regulations on application in the Employment Ordinance (1994:373). There are also specific regulations for public higher education in the Higher Education Act (1992:1434) and the Higher Education Ordinance (1993:100). Provisions may also be found in the Discrimination Act (2008:567), the Administration Act (2017:900) and the Language Act (2009:600). Active measures at KTH. In cases of perceived discrimination, employees may make a complaint directly to the Discrimination Ombuds Office. This complaint to the Discrimination Ombuds Office may be made in parallel with a complaint to KTH.

11. Sustainable Cities and Communities

Make cities inclusive, safe, resilient and sustainable

KTH's campuses are situated in the region of Stockholm, Sweden, one of the fastest growing urban centres in Europe. Through education, research, and collaboration with local communities, KTH has the opportunity to help form inclusive, sustainable and smart cities. This supports rural-urban linkages that are socially, environmentally, and economically beneficial, and respectful of basic human rights.

Sustainable Urban Planning and Design Master's Programme

KTH offers several educational programmes that focus on urban planning, sustainable development, and resilient city design. A key programme is the Sustainable Urban Planning and Design Master's Programme, which combines architecture, urban planning, civil engineering, and natural and social sciences. This programme equips students with the skills to design and plan sustainable, inclusive, and resilient cities through practical projects emphasising social, environmental, and economic sustainability. The curriculum covers topics such as social sustainability, regional development, public spaces, green urban development, participatory processes, sustainable transport, and resilience. Graduates are prepared for careers as urban planners, sustainability consultants, environmental planners, traffic planners, and more. Through this programme, KTH contributes to advancing safe, inclusive, resilient, and sustainable urban environments, directly aligned with the goals and targets of SDG 11.

Sustainable Buildings – Concept, Design, Construction and Operation

This course equips students with the knowledge and tools to design, build, and operate sustainable buildings with a holistic triple-bottom-line approach, considering environmental, economic, and social impacts through all life cycle stages. It emphasises energy and water efficiency, bioclimatic design, renewable resources, and integrated building systems like thermal comfort and indoor air quality. Students learn to use advanced modelling tools such as energy simulation and BIM for evaluating building performance. The course includes expert lectures and applied learning through projects and field visits to high-performance buildings and urban districts.

The course prepares future professionals to create resource-efficient, resilient, and inclusive urban built environments.

Mistra Sustainable Accessibility and Mobility Services (SAMS)

The vision of the Mistra SAMS Sustainable Accessibility and Mobility Services research programme is that Sweden by 2030, Sweden has largely achieved a transition to far-reaching sustainable accessibility and mobility in urban regions through the implementation of disruptive accessibility services that meet the needs and preferences of broad groups of users and significantly contribute to sustainability targets.

SSL as a Centre at KTH

Stockholm Senseable Lab, SSL, is a collaboration between KTH, the Massachusetts Institute of Technology, MIT, and the Municipality of Stockholm comma to jointly pursue research in sustainable urban development. The centre explores, together with the Municipality of Stockholm, new dimensions of a smart city: mobility, energy production and energy efficiency, environmental monitoring, water and waste management, public health and governance models. A current project is Safety in Kista - Safety can be experienced differently depending on whether you live in an area, work in an area or visit an area. In this research project, the researchers look at perceived security in Kista, knowledge that is important when planning and building housing.

KTH Live-In Lab

KTH LiveIn Lab is a platform for accelerated innovation in the real-estate sector, and for collaboration between academia and business. Most test beds in the KTH Live-In Lab are operated in real environments for testing and researching new technologies and new methods. The purpose of KTH Live-In Lab is to reduce the lead times between test/research results and market introduction. In this way, KTH Live-In Lab aims to facilitate the advent of the sustainable and resource-effective buildings of the future. KTH Live-In Lab also ensures that KTH becomes a sustainable campus and that Stockholm retains its leadership in sustainable urban development with a focus on digitisation and smart cities. This is done by accelerating the pace of innovation in the construction and real-estate sectors, based on excellence in research, education and collaboration.

Viable Cities Driving Sustainable Urban Development Towards Climate-Neutral Cities

Viable Cities is Sweden's largest research and innovation programme focused on smart, sustainable cities. Coordinated by KTH alongside partners, the programme works mission-driven to achieve climate-neutral cities by 2030, while ensuring a good quality of life within planetary boundaries.

Viable Cities brings together over 100 organisations from academia, industry, the public sector, and civil society to pioneer systemic change for sustainable urban living. A central initiative is the Climate Neutral Cities 2030 effort, where cities and partners commit to ambitious climate action through Climate City Contracts.

This program is a vital contributor to SDG 11: Sustainable Cities and Communities, showcasing how research, innovation, and collaboration can create resilient, inclusive, and environmentally responsible urban spaces.

Research on the Importance of ethics when working with Smart Cities

One key to achieving Stockholm's vision of being the world's smartest city by 2040, is the use of digitalisation, sensors and artificial intelligence (AI), to analyse huge volumes of data that are generated by the inhabitants.

But to gain the confidence of people for the surveys that are being done, you need to identify and manage the ethical questions that arise when people come face to face with new technology. Investigations about ethical aspects of smart cities are being done in various projects within the parameters of the Stockholm Senseable Lab, a collaborative project between KTH and MIT.

DeepFlood: Enhancing Flood Detection and Mapping for Resilient Communities

The DeepFlood project develops advanced hybrid models combining polarimetric SAR data, metaheuristic algorithms, and deep learning, to deliver rapid and accurate flood mapping with water depth information. Timely and precise flood detection is critical for effective disaster response, risk mitigation, and land and water management, including managing groundwater recharge and controlling pollutant spread in agricultural, urban, and coastal environments. The project outcomes support diverse stakeholders in reducing flood impacts on people's lives and promoting resilient urban and rural communities.

Planning an Evidence-Based Decision Support System for Safe and Secure Stations

This project aims to develop an evidence-based decision support system designed to enhance safety and security at transit stations. The research integrates spatial crime data analysis, victimisation patterns, and perceptions of safety to inform targeted crime prevention strategies. This initiative promotes inclusive, safe, and resilient urban spaces, particularly in public transportation environments, thereby improving the quality of life and accessibility in cities.

New Reasearch Shows the Climate Impact of Buildings

On behalf of the Swedish National Board of Housing, Building and Planning, KTH researchers, together with the IVL Swedish Environmental Research Institute and the consulting company WSP, have collected data and calculated the climate impact of 68 new buildings in Sweden. The work is unique n its kind and is expected to provide the construction sector with new knowledge about what impacts the climate on a large and small scale, as well as how climate impact during the construction of buildings can be gradually reduced.

Albano is Sweden's First Campus Area to be CityLab Certified

At the Albano campus, 70,000 square metres of new university premises, 1,000 student and research housing as well as landscaped parks, shops and restaurants are being built. The area will be the first campus environment in Sweden to be certified according to Citylab which, unlike other environmental certifications, does not only apply to an individual building but covers an entire urban development project. Albano stands out as an urban development project on the cutting edge of sustainable urban development. The development of the Albano campus into a modern and competitive university environment takes place in harmony with nature and with the goal of becoming a role model in sustainable urban development. Several sustainable efforts are being made, including strengthening the possibility of increased species richness for, for example, pollinators and birds. New water systems are being created to take care of storm water and improve the microclimate and outdoor environments that are designed to strengthen the distribution routes for plants and animals.

KTH Campuses and Public Access

KTH Royal Institute of Technology has several campuses in and around Stockholm that serve as open, inclusive environments for students, staff, and the public. These campuses support vibrant urban life and sustainability initiatives. Across KTH's campuses – KTH Campus (main campus at Valhallavägen), Flemingsberg, and Solna – there are multiple shared facilities including student health, libraries, info centres, sports centres, and housing agencies, which foster well-being and inclusiveness. The public and local communities have free access to university campuses, libraries, buildings of cultural and historical significance, concerts by the KTH Academic Orchestra, open lectures, and guided tours highlighting art, architecture, and history.

At the main KTH Campus, visitors can enjoy parks, green spaces, including access to the Royal National Park – the world's first national urban park – urban gardens, beehives, and outdoor gyms. Year-round public events take place in landmarks like the old Nuclear Reactor Hall and open laboratories. Art collections housed in publicly accessible buildings contribute cultural value to the university environment. KTH campuses are highly accessible via public transportation including metro, commuter trains, buses, and bike paths, supporting inclusive mobility options for all visitors. These facilities and access features exemplify how university environments can model safe, inclusive, resilient, and sustainable urban spaces.

12. Responsible Consumption and Production

Ensure sustainable consumption and production patterns

At KTH, research and education on responsible consumption and production focus on areas such as logistics, system knowledge, process development, optimisation, quality improvement, and design and product development. Strong ties to business, industry and civil society leads naturally to excellent conditions to create sustainable manufacturing industries and sustainable consumption practices.

MISTRA Sustainable Consumption

KTH is host to MISTRA Sustainable Consumption, a research programme between academia and partners from business, the public sector and civil society. The aim is to stimulate a transition to sustainable consumption by generating in-depth knowledge on how niche sustainable consumption practices can become mainstream in the areas of food, vacation and furnishing. The programme examines niche sustainable consumption practices and develops roadmaps for how they can be scaled up and mainstreamed by policy makers, business, civil society organisations and citizen consumers.

The vision is that by 2030, sustainable consumption practices have become mainstream in Sweden, to a significant extent catalysed by our programme through knowledge generation and practical change. By 2030, this transition will, contributed to a better quality of life, and equity, within and across borders, and have made Sweden, its companies, governmental bodies, and civil society an internationally recognised example showing that sustainable prosperity is possible.

Sustainable Production Development Master's Programme

The Master's Programme in Sustainable Production Development fosters knowledge and skills of graduates that contribute to a renewal of industrial production. Advanced knowledge and skills in the design and development of production systems are needed in order to address emerging challenges. Rational and cost-effective production systems have been key to industrialisation and wealth for decades. However, the area is experiencing change and pressure in different dimensions, which are altering the role of production systems. Requirements of more renewable energy use and circular material flow, increased digitalisation and automation, new manufacturing technologies, as well as service integration and the emergence of new business models, are among the phenomena shaping production system development and change. Based on a systemic understanding and courses run in close collaboration with manufacturing companies, programme graduates will be prepared for leading the development and design of production systems as a part of the solution towards a sustainable society, attractive workplaces and competitive industries. This programme is closely linked to the growing research activities at KTH Södertälje and industry in the regions.

DiCiM: KTH Driving Digital Circular Economy Solutions

KTH is involved in the DiCiM project, developing digital tools – IoT, AI, augmented reality, and life cycle data platforms – to enhance tracking, reverse logistics, and value recovery in white goods, electronics, and automotive sectors. These innovations improve spare part recovery, extend product lifetimes, and promote remanufacturing, helping to reduce. waste and support circular business models. DiCiM advances SDG 12 by enabling circular economy practices that advance sustainable industrial transformation.

Advancing Sustainable Consumption with Food Quality Sensors

This innovative project involves KTH researchers at WISE materials developing smart sensors designed to monitor the freshness of meat and fish in food packaging. By providing real-time, reliable information on food quality, these sensors aim to reduce food waste and promote sustainable consumption. The technology addresses key issues in food safety and shelf-life extension, helping consumers and retailers make better-informed decisions. This project exemplifies a practical approach to minimising food spoilage and resource waste.

iReGear: Advancing Circular Manufacturing with Remanufactured Gearboxes

The iReGear project, led by KTH in collaboration with Scania and Scandinavian Transmission Service AB, and funded by Vinnova, achieved a groundbreaking milestone by being the first to integrate remanufactured gearboxes into the main assembly line of new trucks. This initiative demonstrated that remanufactured gearboxes meet stringent new production quality standards, face no legal barriers, and receive positive customer acceptance – including willingness to pay a premium for sustainable solutions.

By reusing gearboxes, the project reduced material consumption by approximately 50% and cut carbon emissions by around 45% compared to producing new units. This breakthrough proves that large-scale remanufacturing, via integrating remanufactured components into new products, is technically feasible and scalable. The project

sets a precedent for circular manufacturing systems that minimise environmental impact while maintaining quality and performance.

Circular Concrete Advancing Sustainable and Resilient Cities

The Circular Concrete project at KTH is developing innovative products and business models to enhance reuse and material recycling in the concrete industry. By prioritising prefabricated concrete elements, the project advances circular construction through technical solutions that enable effective dismantling, reuse, and recycling of concrete materials.This work fosters sustainable resource management, reducing reliance on virgin raw materials, and minimising construction waste. Through partnerships with industry, Circular Concrete highlights how circular economy principles can drive sustainability and efficiency in building materials, contributing to a more sustainable production cycle.

Cold-Adapted Biorefinery Concept for Energy-Efficient and Carbon-Neutral Valorisation of Food System Waste

The COLDREFINERY project at KTH develops innovative, energy-efficient biorefinery processes to convert waste from food systems into valuable bioenergy and bioproducts, such as biogas and organic fertilisers. By leveraging cold-adapted microorganisms, the project reduces the need for energy-intensive heating, supporting a carbon-neutral and circular approach to resource management.

This project directly advances SDG 12: Responsible Consumption and Production by promoting sustainable waste valorisation, closing nutrient cycles, and replacing fossil-based products with bio-based alternatives. The COLDREFINERY concept exemplifies how innovation in bio-based production can contribute to a sustainable and circular economy.

Sustainable Technology Master's Programme

Master's Programme in Sustainable Technology covers the concept of Industrial Ecology, focusing on the interaction of technical, economic, social and ecological systems and processes. Students will explore this interdisciplinary framework for designing and operating industrial systems interdependent of natural systems.

Graduates will balance environmental and economic performance and lead the development of strategies for a sustainable future.

EIT Raw Materials

KTH is a part of five consortia of the prestigious EU collaboration, European institute of Innovation and Technology (EIT) that aims to make Europe a global leader for innovation within strategic areas. Within the EIT Raw Materials project, the main focus is on courses and study programmes with a particular focus on sustainability issues, such as life-cycle analysis, recycling, and the replacement of critical raw materials.

XPRES: Centre of Excellence in Production Research

The underlying theme of all XPRES activities is the challenge-driven effort to increase sustainability in manufacturing in terms of economy, human health, and protecting the environment. For this reason, the selected impact cases are aligned to this challenge and refer to a future where the current understanding of "ownership of mass-producing facilities relying on endless resources" is redefined along with the concepts of "sharing economy" and "circular economy".

Circular Public Procurement

The overall aim of the Circular Public Procurement research project is to further promote the use of circular and biobased public procurement in order to guide development for criteria and implementation. Often, green public procurement (GPP) is related more to the environmental impact throughout the life cycle, while sustainable public procurement (SPP) is often related to addressing the three pillars of sustainability. Despite the discrepancy, addressing procurement practices may be an effective approach to motivate greener production methods by orienting production and consumption trends to encourage demand for more sustainable products.

Sustainability Criteria in KTH Procurement

Sustainability requirements are systematically integrated into KTH's procurement and purchasing processes. The procurement group, in collaboration with KTH Sustainability Office, evaluates and follows up on environmental and sustainability criteria for all relevant procurements. For both KTH-led procurements and those performed via national framework agreements, further sustainability requirements may be set at the call-off stage if permissible. The electronic purchasing system Wisum also enables filtering for eco-labelled products.

Smarter Waste Management at KTH

KTH's ongoing commitment to sustainable waste management promotes waste sorting and circular flows, where waste is viewed as a valuable resource, reducing KTH's operational costs and minimising the organisation's environmental footprint. At the end of 2025, KTH's total amount of waste per full-time student and staff member should have decreased by 25% compared to 2019. In 2024, KTH reduced its waste for the first time since 2019 – by 24.8%.

A Circular Resource Plan for sustainable waste disposal has been developed to expand and refine the measurement method to be able to follow KTH's waste development and placement in the EU's waste hierarchy. The introduction of a centralised environmental station and multiple waste sorting rooms on campus, reduces waste transport, further saving costs and lowering emissions. Employees and students are continuously encouraged to improve waste sorting habits to enhance the recycling of materials such as food waste, plastics, cardboard, wood, metal, and glass.

Re-use and Purchasing at KTH Circular Furnishings

KTH is working to develop routines to achieve increased circular use of furniture from acquisition to maintenance and disposal of furniture. There is an agreement with a supplier for furnishings for university environments that will enable, among other things, the repair of furniture, the rental of furniture and the return of furniture. In 2024, the inventory tool CCBuild was procured and began implementation as a pilot project for space optimisation within the administration. This enables the organisation to see where there are furniture items that others have planned to dispose of.

13. Climate Action

Take urgent action to combat climate change and its impacts

Higher education institutions (HEIs) have a central role in efforts to combat climate change. KTH has an important task to contribute through our education, research and external engagement and collaborations, but we also need to contribute by reducing the impact of our own operations. We work actively to reduce our own climate impact by allocating resources so that we can achieve these targets and conduct follow-ups.

Science and Engineering (SEED)

The Department of Sustainable Development, Environmental Science and Engineering (SEED) has developed environmental declarations for building materials for new buildings. SEED has been extensively involved in designing the method that should be used (simplified life-cycle analysis) in a regulation on climate declaration for buildings. The increased political will to introduce regulation to promote the reduction of climate impact from construction of new buildings was largely due to a series of LCA studies of buildings performed by SEED in cooperation with IVL, The Swedish Construction Federation and many construction sector stakeholders.

Electrical Engineering

The Department of Electrical Engineering (EE) conducts research where climate is central in some research questions. For example, how do we do we adapt the electric power grid so that it can handle 100% renewable energy sources from hydro, wind and solar power? How can we balance the level of automation and control of power systems needed for stability, cost efficiency and reducing climate impact with the costs and risks associated with increased computing and communication? The department also contributes by researching electrification of the transport sector with new core knowledge and innovative solutions from several areas within EE, such as electrical machines, power electronics and electronic systems.

Civil and Architectural Engineering

The Master's Programme in Civil and Architectural Engineering trains students in design and how to build our future homes and infrastructure, as well as roads, bridges, or tunnels, with all the challenges related to sustainability and the real demands of society. The programme also focuses on how a structure performs throughout its entire service life, not just during the building phase. Students work on developing and designing buildings and infrastructure with regard to human conditions and needs, and society's objectives for economically, socially and ecologically sustainable development. Some examples are the use of energy from wastewater to heat houses, the development and usage of vacuum insulation panels for the insulation of houses, and the planning construction process where we consider all aspects such as technical, environmental, economic, social, and aesthetic.

Transport and Geoinformation Technology Master's Programme

The focus areas of the Master's Programme Transport and Geoinformation Technology are crucial infrastructures in the creation of sustainable cities, countries and communities in general. Functional and well-developed transport systems are essential in a sustainable and prosperous society. The planning, building and maintenance of such a system demands knowledge of transport and geoinformation technologies, as well as an understanding of how new technologies and policies are adopted, how they interact, and how they affect our daily activities.

Advocate for Extending and Reframing the Sustainable Development Goals to Accelerate Climate Action

KTH researchers join a global call by leading academics to extend the timeline of the UN Sustainable Development Goals beyond 2030, and to reframe them to better address accelerating climate and ecological crises. This initiative emphasises the urgent need for strengthened climate mitigation and adaptation efforts, integrating scientific progress and societal transformations to meet the ambitious targets of SDG 13.

By highlighting gaps in current global goals and underscoring the evolving climate emergency, the call aims to inspire renewed global cooperation, policy innovation, and research focus. KTH's role in this discourse underlines its commitment to advancing transformational climate solutions that accelerate progress towards climate resilience and sustainability.

KTH Climate Action Centre

The KTH Climate Action Centre is a multidisciplinary, collaborative and research focused centre aiming to advance climate mitigation and adaptation in synergy with all the UN Sustainable Development Goals. The aim of the KTH Climate Action Centre is to conduct groundbreaking research in close collaboration with stakeholders to speed up the transformation. The centre engages more than 100 researchers from all parts of KTH, and opens up for dialogue, collaboration and action together with everyone who wants to contribute.

Energy Efficient Negative Emissions from the Agricultural Sector

Energy Efficient Negative Emissions from the Agricultural Sector is a joint project between the KTH Royal Institute of Technology (KTH), the Swedish University of Agricultural Sciences (SLU) and Uppsala University (UU). The overall goal of the project is to develop a direct air capture (DAC) system that reduces multiple greenhouse gases cost-effectively, competing with biomass-based carbon storage (BECCS).

Science for a Secure Society: Enhancing Resilience to Hydro-Climatic Hazards

The Science for a Secure Society project develops a comprehensive, science-based framework to monitor and manage hydro-climatic hazards such as droughts, floods, and heatwaves in Sweden. By integrating advanced modelling with real-time monitoring and risk prediction, the project supports decision-making for disaster risk mitigation and climate adaptation. This innovative approach strengthens societal resilience to extreme climate events, providing actionable tools and an adaptive roadmap for crisis management tailored to Sweden's climate challenges.

LIBRA (Leveraging Artificial Intelligence to Balance Trade-Offs in the Digital Economy)

LIBRA aims to quantify the environmental footprint and sustainability gains of AI investments, addressing the unmeasured but significant climate impacts of AI technologies.

Using state-of-the-art AI techniques such as large language models and deep reinforcement learning, LIBRA identifies sustainability trade-offs and optimises AI's role in supporting climate resilience, clean energy, and sustainable development at national and supranational levels. An interdisciplinary approach blends economics, AI, and sustainability sciences, to enable evidence-based, holistic climate policy.

DeepAqua: Leveraging Deep Learning to Monitor Wetlands and Enhance Climate Resilience

Wetlands are vital for the environment and climate mitigation. They clean water, reduce flood risks, and store large amounts of carbon, making them essential for sustainable development and combating climate change. However, worldwide, wetlands are disappearing rapidly, threatening these critical ecosystem services. The DeepAqua project at KTH revolutionises the quantification of Swedish surface water changes by combining remote sensing technologies with advanced deep learning techniques. This innovative system enables precise, real-time monitoring of water extent and level dynamics in wetlands and other water bodies with unprecedented accuracy and speed. By enhancing wetland management, DeepAqua supports improved climate adaptation and resilience while helping preserve vital carbon sinks and mitigate climate risks.

The Character of Social Engagement in the Climate Transition: How Arguments Work in a Social Context

The research project "The Character of Social Engagement in the Climate Transition" is funded by the Marcus & Amalia Wallenberg Foundation to investigate how arguments function in social contexts during climate transition discussions. The researchers are collecting data through a survey and invite public participation to contribute to their study of social engagement in climate-related issues.

Hydro-Climatic Hazard, Risk, and Crisis Management in Sweden

This research investigates the hotspots, trends and social

vulnerabilities associated with droughts, heatwaves, and floods in Sweden. The innovative frameworks and models can help policy makers to make informed climate adaptation decisions to mitigate impacts and we will promote early warning system improvements for disaster risk reduction related to hydro-climatic hazards.

Climate and Economic Research in Organisations Project (CERO)

Within the framework of the Travel free Meetings in Public Authorities project (REMM), KTH has continued working on the Climate and Economic Research in Organisations project (CERO) in a collaboration between the KTH Sustainability Office and an academic researcher at the School of Architecture and Built Environment. The project includes both financial and environmental analyses of business trips and commuter travel as well as workshops. Through the CERO project, KTH has developed a follow-up tool for managing objectives and measures to reduce KTH's emissions.

ReForMit: Securing the Resilience of Forest-Based Climate Mitigation

The ReForMit project at KTH focuses on understanding and enhancing the resilience of forest-based climate mitigation strategies amidst shifting hydro-climatic conditions. By combining advanced vegetation and Earth system models with stakeholder collaboration, the project works to ensure forests continue to provide vital water, climate, and biodiversity functions despite natural and human-induced challenges. This holistic approach strengthens the adaptive capacity of forests, supporting effective climate action and limiting global warming.

The Climate Framework and the Universities' Climate Network

In 2019, KTH and Chalmers University initiated the internationally acclaimed Climate Framework for Swedish Higher Education Institutes (HEIs) which 38 HEIs have signed. Working with Sweden's higher education sector, a Climate Framework was created to align institutions' climate strategies with national and international commitments, including the Paris Agreement's 1.5°C target and Sweden's climate neutrality goal for 2045. The framework aims to reduce collective emissions of Swedish HEIs, and integrate climate action into education, research, and collaboration. Since 2021, SUHF's expert group has led this work through the Universities' Climate Network, which continues to advance the framework.

KTH's Climate Objectives and Measures

In accordance with The Climate Framework, KTH developed climate objectives for 2021–2045. The climate objectives directly affect KTH's employees and students, as well as KTH's property owners, business partners, financiers and other external partners, where relevant. The objectives address the areas that have a major impact from a climate strategy perspective and concern KTH activities such as education, research and collaboration, as well as the impact from its own activities through, for example, waste management, LCA and circular procurement.

In addition, many of KTH's Sustainability Objectives related to the campus have implications for climate change, including energy use, waste management, and transport to and within our campuses. The Objective related to travel and transportation concerns emissions of carbon dioxide from air transport. The target on procurement includes climate aspects. The overall environmental management system can therefore be seen as part of the climate action plan for the university.

14. Life Below Water

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Universities contribute to protecting and preserving aquatic ecosystems through education, research and supporting collaborative management and conservation. KTH is also active in developing sustainable use of marine resources for food, materials and energy.

WaterCentre@KTH – Innovations for the Blue Planet

The Water Centre at KTH is a broad collaborative effort based at KTH with the mission to bring about water innovations for a sustainable future of the Earth based on meetings between experts, practitioners, and policymakers. The WaterCentre's research focuses on four themes that combine the wide expertise at KTH around society's challenges with water: Circular, Decentralised, Digitalised, and Marine. The centre connects scientists within IT/ ICT, Marine science, Water science and treatment and Water system and management, and offers an arena for joint knowledge creation with industry, government and civil society.

RoboIguana: Underwater Robot for Ocean Conservation

Precise seafloor information is required to work toward the goal of protecting marine biodiversity and supporting the SDG 14. The comprehensive 3D visual imagery of the desired seafloor area and the derived measurable environmental parameters like depth, slope, aspect, curvature, and terrain variability are powerful tools for habitat predictions. In this project, the ocean floor close to Gullmarsfjord, a natural reserve and the largest and only true fjord in Sweden, is 3D mapped.

Engineered Floating Wetland

Nature based solutions have proven to be able to successfully tackle eutrophication problems, resulting in increased marine biodiversity, cleaner water, reduced greenhouse gas (GHG) emissions and use of harvested biomass as valuable materials. The objective of the Engineered Floating Wetland project is to finalise the development and perform onsite tests of a novel floating wetland system at Utö in the Stockholm archipelago, to capture excess nutrients in the Baltic Sea water. In the long term, the overall goal is to provide a successful model for future implementations for eutrophic marine areas as well as freshwater systems around the Nordic region.

Horizon Europe Project CIRCALGAE

This EU project, coordinated by KTH, aims to find ways to create new products from algae waste. The Horizon Europe project CIRCALGAE "Circular valorisation of industrial algae waste streams into high value products to foster future sustainable blue biorefineries in Europe", consists of a consortium of 21 partners from nine different countries and is the biggest EU project coordinated by KTH so far. Through CIRCALGAE, the idea is to develop biorefineries on an industrial scale in order to create products together with industrial partners such as vegan foods, health promoting food ingredients, protein rich feed, and cosmetic formulations.

Environmental Genomics Study

The research group of Environmental Genomics study how complex communities of microorganisms influence human health, and play important roles in the Earth's geochemical cycles. Recent advances in high throughput biology techniques make it possible to study the genetic potential and functional activities of natural microbial communities without the need for culturing.

The major focus is the Baltic Sea, where the work follows two major trajectories:

1. To model the microbial ecological network that underpins the pronounced season dynamics in microbial community composition of surface waters.
2. To reconstruct the genomes of the most abundant microbial players.

Kristineberg Center for Marine Research and Innovation

The research and innovation platform Kristineberg Center is a collaboration between the University of Gothenburg, Chalmers, KTH Royal Institute of Technology, IVL Swedish Environmental Research Institute, RISE and Municipality of Lysekil. At Kristineberg Center, marine university education and research focusing on ocean acidification, microlitter and innovation is conducted.

RoboIguana: Underwater Robot for Ocean Conservation

Precise seafloor information is required to work toward the goal of protecting marine biodiversity and supporting the SDG 14. The comprehensive 3D visual imagery ofthe desired seafloor area and the derived measurable environmental parameters like depth, slope, aspect, curvature, and terrain variability, are powerful tools for habitat predictions. In this project, the ocean floor close to Gullmarsfjord, a natural reserve and the largest and only true fjord in Sweden, is 3D mapped.

Eaurope's Seafood Farmers may get Boost from AI Reasearch

Researchers at KTH's Blue Food Centre develop AI-driven underwater drones and machine learning systems to reduce costs and improve efficiency in aquaculture, especially in offshore and hard-to-access waters. This innovation boosts competitiveness while promoting responsible ocean resource use, helping to build resilient marine food systems crucial for biodiversity and climate goals.

Ocean's Smallest Creature is Mapped

KTH researchers are advancing sustainable ocean monitoring by using AI-based image analysis to map and study marine plankton, the ocean's smallest creatures. This cutting-edge research enhances understanding of how climate change affects plankton species' composition and behaviour, crucial for marine ecosystems, as plankton produce half of the world's oxygen, and form the foundation of aquatic food chains. By enabling large-scale, cost-effective analysis of plankton populations, this work supports informed actions to protect marine biodiversity and ecosystems.

Djurö Marine Field Station

Djurö Marine Field Station, in cooperation with Värmdö municipality, is a resource for marine research in the Baltic Sea focused on a sustainable archipelago development, decentralised and individual water and sewage solutions, as well as technology and ecology in the marine environment.

SMaRC Swedish Maritime Robotics Centre

SMaRC Swedish Maritime Robotics Centre is a national cross-disciplinary industrial research centre for maritime robotics. The main task is to perform research on, and demonstrate, solutions that can contribute to the transition to autonomous intelligent underwater systems. The centre will focus on four research disciplines: autonomy, endurance, perception and communication, with the aim to develop next-generation maritime robotics for ocean production, safeguarding society and environmental sensing.

Pacífico Econavipesca Project: KTH Royal Institute of Technology Field Study

The objective of the project is to develop a sustainable artisanal fishing model that reduces the environmental, social, and economic impacts on the ecosystem in the municipality of Guapi, Cauca, in Colombia. A major challenge is to reduce dependence on fossil fuels for the fishing boats and engage in dialogues with the local community about ways to create social entrepreneurship opportunities to make fishing activities more sustainable in the long term. This KTH field study produced two reports. The centre will focus on four research disciplines: autonomy, endurance, perception and communication, with the aim to develop next-generation maritime robotics for ocean production, safeguarding society and environmental sensing.

15. Life on Land

Protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss

KTH contributes to sustainably managed terrestrial ecosystems through education and research, but also through collaboration with landowners and Stockholm Region in the management of our Campus environments.

Sustainable Urban Planning and Design

The Master's Programme in Sustainable Urban Planning and Design focuses on the interrelationship between the built environment and social, economic and institutional forces, and is relevant for several SDGs, including SDG 15. The programme develops professionals with a profound and broad understanding of the multiple factors in sustainable urban development. Students are trained to alter planning and design practices to respond to the environmental conditions and societal needs of the future. To minimise the environmental impact of urban development, innovative solutions are required. Through exercises and lectures, students will be encouraged to incorporate new technologies, sustainable materials and green solutions, as well as strategies that reduce the need for urban expansion in their proposals to enhance ecosystem services and the sustainable management of natural resources.

Earth Observation and Artificial Intelligence for Detection of Global Change Ecological Assessment (EO-AI-EcA)

The "Earth Observation for Climate Diplomacy: Ecosystem Conservation in Africa (EO4CD-ECA)" project at KTH focuses on utilising Earth Observation data to monitor and assess ecosystems in Africa, contributing to the conservation and sustainable use of terrestrial and freshwater ecosystems. By leveraging advanced technology, the project aims to support biodiversity monitoring, inform climate diplomacy, and enhance policy decisions related to ecosystem conservation. Through international collaboration, it seeks to address critical environmental challenges and promote sustainable practices.

KTH Technology to Map Fire Risk at Sqaure Metre Level

KTH researchers are developing innovative technology to reduce grass and forest fire risks in Sweden, addressing the increasing threat from climate change. As part of the FIRE project, they are creating a sensor platform for forestry machines that produces high-resolution fire risk maps at the square-meter level. This platform integrates lidar to measure soil moisture and AI-powered cameras to detect stones, combining these factors to provide real-time, localised fire risk assessments. This breakthrough enhances precision forestry management, aiming to prevent wildfires and protect terrestrial ecosystems. Widespread implementation, anticipated by 2030, will contribute significantly to safeguarding biodiversity and improving land resilience.

LandEX: Resilience by Integrating Measures to Adapt and Mitigate hydrological EXtremes

The LandEX project, an EU research project across five countries, is advancing landscape resilience to hydro-climatic extremes such as floods and droughts, a growing threat intensified by climate change.
By integrating and spatially optimising a range of nature-based adaptation measures, LandEX aims to mitigate the impacts of these hydrological extremes across diverse European landscapes. Utilising advanced hydrological connectivity models and active stakeholder collaboration, the project co-creates adaptation scenarios that enhance both ecological sustainability and human well-being. LandEX aligns with SDG 15 by promoting the sustainable management and restoration of terrestrial ecosystems and fostering biodiversity resilience. It further supports climate adaptation goals through innovative solutions that buffer ecosystems and communities against increasing environmental stresses.

RESOLVE Project

The RESOLVE Project at KTH focuses on developing climate-resilient and eco-sustainable railway earthworks by mitigating geohazards while balancing biodiversity. By integrating scientific, engineering, and environmental disciplines, RESOLVE aims to create railway infrastructure that withstands climate impacts and minimises ecological disruption. This approach supports the sustainable management and restoration of terrestrial ecosystems and biodiversity.

REPLAN: Nature-Based Solutions and Green Infrastructure for Sustainable Urban Transformations

This research project aims to understand and facilitate the interplay of processes, actors, and tools across planning tiers to support Swedish spatial planning in integrating Nature-Based Solutions and Green Infrastructure to achieve human well-being while conserving life-supporting ecosystems in urban regions. The research project is funded by FORMAS and will continue until 2025.

Tree Recovery, Beehives and Community Gardening

The KTH Sustainability Office, in collaboration with Akademiska Hus, has successfully recovered 20 trees that were recently removed from the KTH Campus. The reclaimed tree trunks have been transformed into natural seating areas for visitors, simultaneously providing valuable habitats for insects and fungi. Branches and smaller tree parts have been creatively repurposed to serve as insect nests, enhancing local biodiversity.

In addition, KTH Campus hosts four beehives producing honey that is not only used as distinguished gifts representing the university, but also served in campus restaurants and cafés. The presence of the beehives contributes to pollinator health and promotes ecological awareness within the campus community. The beehives at KTH Campus are carefully managed to support pollinator health while minimising competition with native pollinators.

KTH Campus further supports sustainability and community engagement through 16 urban gardening boxes. These are allotted to students and staff for recreational cultivation as well as valuable educational purposes, fostering hands-on learning about sustainable food production and urban ecology.

16. Peace, Justice and Strong Institutions

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Peaceful, just and inclusive societies are necessary to achieve the UN Sustainable Development Goals. Effective and inclusive public institutions are needed to further Agenda 2030 and the SDGs. Governments, civil society and communities must work together to implement lasting solutions. Universities such as KTH support this work by providing expertise and knowledge as a basis for well-grounded policy and decision making.

KTH's Organisation

The University Board is the top executive unit. The chair of the board is, together with other societal representatives, appointed by the government. Other members of the board are the President of KTH, faculty members elected by the faculty and student representatives appointed by the student union. Union representatives can participate and express their opinions. The president's strategic council includes all heads of schools, vice presidents, the deputy president, the university director, the dean and pro dean of the faculty, which are elected by the faculty and student representatives. There are currently six vice presidents appointed by the president for specific tasks including one for sustainable development and one for gender equality and values.

KTH Working with the Government

KTH's researchers are part of several government councils and delegations with a connection to sustainable development, such as the City of Stockholm scientific advice for sustainable development and the delegation for circular economy.

Official Remittance and Consultation Responses

Before the Swedish government takes a position on a proposal, proposals are sent for consultation to authorities, organisations and other stakeholders. All answers and other remittances in connection with the referral are included in the basis for the decisions that follow the referral. As a public university, KTH is a remittance body to the government when it comes to investigations, legislation, policies and strategies in sustainable development. Remittance and consultative responses are recorded and open to the public.

Making Universities Matter: A Knowledge Platform on the Role of Universities in Society

Making Universities Matter is a knowledge platform that sets out to understand how universities arrange their activities and how they are aligned with different interests in society. The platform studies how the blend of missions and tasks of universities has evolved over time and will relate that mix to institutional specificities such as state governance and how universities interact with students, scientific communities, and stakeholders in industry, government and civil society. It also seeks to elucidate cross-national differences and similarities in the institutionalisation (and change) of universities: in Sweden and other countries in Europe, and through relevant comparisons with the evolution of university roles in North America and Asia. The platform also aims to engage in policy debates on universities, providing policy relevant briefs and serving as a forum for topical discussion.

Master's Programme in ICT Innovation

This programme includes courses on e-governance and digital democracy, contributing to Target 16.6 on developing effective, accountable, and transparent institutions. The programme equips students with the skills to create innovative solutions for societal challenges.

Cyber Defence and Information Security (CDIS)

The research at KTH's Centre for Cyber Defence and Information Security (CDIS) strongly supports SDG 16 (Peace, Justice, and Strong Institutions) by enhancing the security and resilience of critical societal infrastructure against cyber threats. CDIS develops advanced techniques and methods for robust national cyber defence, protecting essential information systems and societal functions from cyberattacks that could cause significant social disruption. This work strengthens institutional capacities to prevent, detect, and respond to cybersecurity risks. Through cutting-edge research in areas such as cyber situational awareness, secure IoT, post-quantum cryptography, and cyberoperations, CDIS contributes to the development of accountable, transparent, and effective digital systems that underpin strong institutions and trust in the digital era.

Digital Futures

KTH's Digital Futures initiative drives interdisciplinary research projects that advance trust, cooperation, and learning in the digital transformation of society, directly contributing to SDG 16 – Peace, Justice, and Strong Institutions. Established jointly by KTH, Stockholm University, and RISE, Digital Futures emphasises regulatory compliance, ethical AI deployment, and technological innovation to shape a sustainable society. Key research themes include "Trust," which focuses on privacy, information security, and legal safeguards; "Cooperate," promoting collaboration between humans and intelligent systems; and "Learn," which explores machine learning and rule of law implications for ethical AI. The initiative engages academia, industry, and society through partnerships with stakeholders like Ericsson and AstraZeneca, addressing real-world challenges such as AI in health, 6G technology, and digital literacy. This integrated approach underscores KTH's commitment to strengthening institutions, governance, and societal trust through digital transformation aligned with SDG 16 ambitions.

Transparent and Accountable Research Practices

KTH's Commitment to Legal and Ethical Data Governance. KTH upholds strong legal and ethical standards in research data management to support SDG 16 by promoting transparent, accountable, and trustworthy research practices. Their guidelines ensure that research data is handled in compliance with Swedish law, including public access principles, privacy protection under GDPR, intellectual property rights, and ethical review requirements. By clarifying responsibilities in data processing and promoting open data with necessary confidentiality safeguards, KTH fosters integrity and robust governance in scientific research. This commitment enhances institutional effectiveness and builds trust in research outputs, contributing to peaceful, just, and inclusive knowledge systems.

Technology Ethics

The university contributes to ethics for emerging technologies through courses in Technology and Ethics as well as professional courses such as Ethics and Sustainability, addressing Target 16. on promoting non-discriminatory laws and policies.

17. Partnerships for the Goals

Strengthen the means of implementation and revitalise the global partnership for sustainable development

KTH is part of various regional, national and international networks and partnerships that work with sustainability issues through the exchange of knowledge, experiences and resources. These networks span academia, industry and civil society. Multilevel partnerships are key to implementing the goals of Agenda 2030.

KTH demonstrates a robust and strategic commitment to SDG 17 (Partnerships for the Goals) through extensive, multilevel collaborations locally, nationally, and internationally. The university cultivates partnerships with industry leaders, governmental entities, and civil society organisations to address pressing global challenges. These collaborations provide tangible, real-world opportunities for students and researchers, strengthening capacity and fostering innovation in sustainability.

The KTH Sustainability Office actively promotes sustainability integration across education, research, operations, and external cooperation, facilitating ongoing collaboration with academic, industrial, and public sector partners. Annually, KTH organises over 100 sustainability-related events, bringing together diverse stakeholders for knowledge sharing,facilitating partnership development and co-creation. Through stewardship, KTH's Sustainable Development Policy prioritises partnerships that promote sustainability, gender equality, and climate impact reduction, underscoring governance commitment to responsible resource management aligned with the SDGs. University-wide Sustainability and Climate Objectives (2021-2025 / 2021-2045) institutionalise robust sustainability and climate action commitments emphasising collaboration, innovation, and societal impact, explicitly integrating gender equality, diversity, and social sustainability alongside environmental and economic considerations (Objectives Details, Inclusion). Regular Sustainability Reporting and Audits ensure transparency and assessment of contributions.

In research, KTH engages in cutting-edge interdisciplinary projects with international institutions and industry, contributing to solutions in digitalisation, climate action, and life sciences. Examples include strategic alliances with over 200 global universities facilitating staff, student, and research exchanges, as well as national and international research infrastructures funded by the Swedish Research Council that enable world-leading science accessible to multiple partners.These infrastructures enable research of world-class quality with broad national and international interest, prioritising accessibility, and having long-term management and development plans (Research and Educational Partnerships, KTH Research Infrastructures).

KTH maintains a long-standing strategic partnership with the Stockholm Environment Institute (SEI), an international policy-focused think tank working to bridge research and decision-making. The House of Science (Vetenskapens hus), co-owned by KTH and Stockholm University, annually reaches about 80,000 school students and teachers with programmes on environment and sustainability, creating early partnerships for STEM and sustainability engagement.

Outreach includes collaborations like the Södertälje Science Park, the Stockholm Trio for Sustainable Actions with Karolinska Institutet and Stockholm University – a strategic alliance fostering interdisciplinary research, education, and societal engagement aimed at sustainable development challenges locally, nationally, and globally – and OpenLab, an innovation platform involving regional

stakeholders advancing sustainable urban solutions. OpenLab focuses on interdisciplinary second cycle courses and workshops addressing regional challenges. Projects like Frontrunners for Sustainable Innovation foster collaborative research and innovation between KTH, SMEs, and demo environments including OpenLab, Kista Science City, and Urban ICT Arena, contributing to digitalization, life sciences, and environmental technology aligned with Stockholm's vision of a smart sustainable city by 2040.

The university is active in national networks such as MLUH (Environmental Leaders within Universities and Colleges), and The Association of Swedish Higher Education Institutions which was instrumental in developing The Climate Framework for Higher Education Institutes in Sweden. KTH is a member of the international networks Sustainable Development Solutions Network Northern Europe (SDSN NE), uniting academic, business, and civil society actors to promote sustainable development regionally and globally. The university co-hosts the International Sustainable Campus Network (ISCN), providing a global forum for sharing best practices in sustainable campus operations and integrating sustainability into education and research.

Together, these multi-faceted partnerships and governance commitments highlight KTH's comprehensive approach to driving sustainable development through education, research, stewardship and outreach.

KTH and Sustainability Rankings

Times Higher Education Impact Rankings

In 2024, KTH Royal Institute of Technology was ranked in the 101-200 group in the world in THE Impact Rankings, which address the UN's 17 Sustainable Development Goals. KTH was ranked among eight of the 17 global goals, including:

- 23rd worldwide for SDG 13 (Climate Action)
- 50th worldwide for SDG 11 (Sustainable Cities and Communities)
- 82nd worldwide for SDG 12 (Sustainable Consumption and Production)

The ranking was based on extensive documentation of texts related to the sustainability goals, from KTH's website, as well as bibliometric and other quantitative data.

QS World University Rankings

KTH ranks 74th among more than 1,500 universities worldwide in the QS World University Rankings, 2025. Additionally, KTH ranks 66th in the QS Sustainability Rankings, which evaluate universities' environmental and social governance efforts. The sustainability score reflects a comprehensive index measuring factors such as alumni impact in the corporate sector, investment in sustainability strategies, sustainability education and its impact, as well as equality initiatives. KTH continues to demonstrate strong international performance and remains the top-ranked university in Sweden according to QS

About This Report

In this report, we highlight some of the many research, education, outreach and operational activities at KTH that contribute to the achievement of the United Nations Sustainable Development Goals.

The report was developed by Erica-Dawn Egan in collaboration with many engaged colleagues from many different parts of KTH, including KTH Sustainability Office, KTH Schools and University Administration. It is based on KTH's Annual Report, Report to the University Board, KTH's Sustainability Objectives reviews, nominations, website review and review of media, publications, articles and other sources.

This report examines the connections between our core business and operations to the Sustainable Development Goals. The report will be further developed in the future. Comments and suggestions are welcome!

Bibliometrics

According to a bibliometric method developed by KTH, the share of published peer review articles with a bearing on sustainable development (467 search terms) was 2,024, 17% of the total amount of peer review articles (389/2,290). This share (and total number) has decreased somewhat compared to the year before, but the trend has overall been positive since 2010.

The SDG which has the largest share of publications is SDG 7, Affordable and Clean Energy, followed by SDG 9 Industry, Innovation and Infrastructure, and SDG 11, Sustainable Cities and Communities.

REFERENCE NUMMER: HS-2025-1997 KS-kod: 1.3 Årsrapport över hur KTH arbetar mot FN:s globala mål (The UN Sustainable Development Goals Report 2024)


KTH
VETENSKAP
OCH KONST