SUSTAINABILITY HGHLGHTS

Sustainability and responsibility at the University of Helsinki in 2021



UNIVERSITY OF HELSINKI

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FOREWORD VICE-RECTOR TOM BÖHLING

The University of Helsinki is a community of 40,000 people, whose competence, expertise and diversity provide the preconditions for building a more sustainable future. In September 2022, I visited the Tvärminne Zoological Station, familiarising myself with the wonderful multidisciplinary research and teaching conducted there. The research station has been operating for 120 years – a true pioneer in sustainability. The operations at Tvärminne are just one example of the longstanding work to promote sustainability and responsibility carried out at the campuses and units of the University of Helsinki.

In the Strategic Plan of the University of Helsinki for 2021–2030, we state that sustainability and responsibility will guide all our operations, and that our research and teaching will enhance sustainable wellbeing through interaction with the surrounding society. In other words, we will increasingly invest in sustainability efforts in this strategy period. The first year of the period is now in the past, and now is the time to take a look back and candidly consider our achievements.

It is important for the entire community to be able to monitor the development of sustainability and responsibility efforts. To make this possible, we will be publishing a report on the progress of our work each year. These reports will provide us with an overview of our sustainability endeavours, as well as the opportunity to consider how



we can, as both individuals and as a community, reach our shared goal. After all, we wish to be a leader in responsibility and sustainability.

Reading the report myself, I was proud to say that we are promoting sustainability and responsibility on an extremely broad front. I wish to thank the entire community for making a significant contribution. The University of Helsinki has ambitious goals, and cooperation is the only way to achieve them.

SUSTAINABILITY HIGHLIGHTS IN 2021

This report presents highlights from our sustainability and responsibility efforts in 2021. It is a collection of activities related to research, teaching, public engagement and our everyday operations.

Besides the measures and goals set out in this report, the University community has implemented other measures promoting sustainability and responsibility across the University. For example, our students have actively organised related events and promoted sustainability and responsibility in student associations. The Student Union of the University of Helsinki took part in the 'Sustainability holds us up, uphold sustainability' project of the National Union of University Students in Finland by organising several events during the Sustainable development week in autumn 2021. We are looking for ways to promote sustainability and responsibility together with our students in an increasingly effective manner.

'Sustainability Highlights – Sustainability and Responsibility at the University of Helsinki 2017–2020', the University's first report on sustainability and responsibility, was published in spring 2022. This report offers an extensive overview of the structure and operating culture of our organisation. The previous report can be read on **the sustainability and responsibility section of our website**.

Over the course of the year, we drafted and compiled the University's first sustainability and responsibility plan, which introduces goals and initiatives relating to the theme for the period 2022–2024. The plan was published at an event held at Think Corner in the spring of 2022. As the plan covers the period 2022–2024, the report focused on 2021 does not describe the progress of the measures presented in the plan. From 2022 onwards, we will report on the realisation of the measures included in the sustainability and responsibility plan.

The report is divided into five sections. To begin with, we will survey the structures and operating culture that support the University's sustainability and responsibility efforts. After that, we will present highlights from 2021 related to research, teaching and public engagement, our core duties. Finally, we will describe how we have promoted sustainability and responsibility in our everyday operations.

KEY FIGURES 2021

30,817 degree students



Open University students

8,241

employees, of whom **4,801** are teaching and research staff **3,179** research projects invention

disclosures

25

patent applications

25

higher education institutions involved in the Climate University network led by the University of Helsinki 270

students from 89 different degree programmes who participated in the second pilot of the Sustainability Course 0€

fees for courses offered by the Open University to those unemployed or furloughed and students of general upper secondary schools in Helsinki

240,000

visitors to the public attractions of the Natural History Museum

3,400

viewers for the Solving biodiversity loss programme series at Think Corner attendees at the Sustainability Science Days conference

31,937 tCO²e

Our carbon footprint including climate emissions caused by the energy consumption of University buildings as well as air travel

2,002 mWh:

Total savings from energy efficiency measures carried out

More **520**

pieces or sets of furniture sold through the Kiertonet service **10** tor

of movable property donated to charity to be restored and for subsequent further use **1,961**

Kilometres travelled on the University's day of outdoor exercise

WITH THE POWER OF KNOWLEDGE - FOR THE WORLD

We are building a better future through research, teaching, public engagement and our daily activities. In our most recent strategic plan, we have outlined our role as a pioneer in building an increasingly sustainable and responsible world. The year 2021 was the first of our new strategy period.

Our strategic plan for the period 2021–2030 emphasises fresh thinking, the students' role and a creative research environment. We are solving global problems in collaboration with both established and new partners. The strategic plan was drawn up collaboratively by the entire University community as well as stakeholders such as alumni and decision-makers. The strategic plan is founded on the shared values of truth, Bildung, freedom and inclusivity, which steer our everyday activities and interaction. In addition to our strategic plan and values, our operations and decision-making are founded on our **ethical guidelines**.

Our four strategic choices for achieving our vision are:

- **1.** Knowledge and learning are for everyone.
- 2. Openness enhances scientific research and collaboration
- **3.** Our University is the best place to study and work.
- **4.** Our University is a leader in responsibility and sustainability.

WE DREW UP OUR FIRST SUSTAINABILITY AND RESPONSIBILITY PLAN

The aim is that, by 2030, the Sustainable Development Goals of the UN will have been integrated into our operating culture, and that we will have significantly stepped up our ecological sustainability and achieved carbon neutrality. To promote the achievement of our ambitious strategic goals and to strengthen our sustainability and responsibility efforts, the first sustainability and responsibility plan of the University of Helsinki was published in spring 2022. The plan was drawn up by engaging the University community in various stages of the process. As part of the plan, we are establishing a sustainability and responsibility network that will provide the community with the opportunity to promote in practice the Sustainable Development Goals of the UN.

The sustainability and responsibility committee served as the steering group for drawing up the plan. The committee consists of specialists developing the University's sustainability and responsibility efforts, representatives of faculties and administrative sectors, and student members. The committee is chaired by the vice-rector in charge of sustainability and responsibility at the University.







INCLUSION AND THE PROMOTION OF A HEALTHY STUDY AND WORK CULTURE AS FOCUS AREAS IN EQUALITY AND DIVERSITY EFFORTS

We published the collectively drafted Equality and Diversity Plan for 2021–2025. The plan focuses on the promotion of the following: inclusion, a thriving study and work culture, equal leadership and management as well as social equality. The theme for 2021 in the University's equality and diversity activities was the promotion of anti-racism. During the year, we actively contributed to the equality and diversity activities of the League of European Research Universities (LERU) and the Una Europa alliance. Our equality efforts are coordinated by a designated equality advisor, in addition to which there are equality and accessibility contact persons in units. The University also has an equality and diversity committee chaired by one of the vice-rectors.

Ethics Advisory Council: In spring 2021, the rector appointed an ethics advisory council for the University. The council urges members of the University community to adopt an increasingly responsible approach to work and supports the University's leadership in making decisions that require ethics assessment. **The University-wide ethical guidelines were also published**.

Status of grant-funded researchers improved: The purpose of the grant-funded researcher agreement is to make grant-funded researchers an increasingly integral part of the University community. In the future, those who have concluded the agreement are no longer charged a fee for using an office at the University, in addition to which they have access rights to electronic workgroup areas and are included in the expert finder feature of the University of Helsinki website.

The Faculty of Educational Sciences has its own working group for sustainable **development**, which plans and develops the Faculty's operations and teaching to highlight sustainable development.

"SUSTAINABLE DEVELOPMENT HAS ALWAYS BEEN WITH ME" – A DONATION BY JARI NIEMELÄ CONTINUES HIS IMPORTANT WORK FOR A SUSTAINABLE FUTURE

We established the Sustainability Fund, to which the first donation was made by our former Rector Jari Niemelä. The fund's purpose is to support sustainability research and teaching at the University and their societal impact, and hence promote sustainable wellbeing in society.

HELSINK

Read more about the Sustainability Fund on the University of Helsinki website.

MULTIDISCIPLINARY RESEARCH ON SUSTAINABILITY

We will further research and learning that will help us better understand and resolve local and global challenges. In accordance with the sustainability and responsibility programme, we will strengthen inter-faculty projects related to interdisciplinary, cross-disciplinary and solutionoriented sustainability research.

A MULTIDISCIPLINARY UNIVERSITY WILL ENGENDER OPPORTUNITIES FOR INTERDISCIPLINARY COLLABORATION

DURING THE STRATEGY PERIOD 2021–2030, RESEARCH AND TEACHING WILL DRAW INSPIRATION FROM THE FOLLOWING THEMES:

A meaningful life, human wellbeing and a healthy environment

A humane and fair world



A sustainable and viable future for our globe

A universe of ideas and opportunities

A course in positive psychology and pedagogy for general upper secondary schools under **the Study with Strength project** also serves as an intervention study. The aim of the study is to determine whether the course affects the wellbeing and stress management of Swedish-speaking general upper secondary school students.

The HUMUS project, which combines environmental science, sustainability science and medicine, seeks knowledge on what kind of changes are needed in healthcare sector's basic assumptions, concepts and views of people, operating models and job descriptions in order to solve the ecological crisis, and what kind of knowledge- and skills-based demands arise from this for the basic functions of healthcare.





HELSUS PROMOTES RESEARCH AND EDUCATION IN SUSTAINABILITY SCIENCE

The Helsinki Institute of Sustainability Science HELSUS combines research and education in the field into a hub that transcends disciplinary and campus boundaries while providing researchers with a cross-disciplinary environment. In 2021, the Faculty of Pharmacy joined HELSUS as the eighth faculty.



faculties: Faculty of Biological and Environmental Sciences, Faculty of Pharmacy, Faculty of Arts, Faculty of Educational Sciences, Faculty of Agriculture and Forestry, Faculty of Science, Faculty of Law and Faculty of Social Sciences



members

Every month, **the HELSUS Sustainability Discussion Group brings** together HELSUS researchers and other people working on sustainability themes to discuss sustainability science and collaborate for the benefit of research results and the community.

The HELSUS Research in Spotlight video series

on the University's YouTube channel describes sustainability research and gives a platform to sustainability researchers and different perspectives on sustainability.

HELSUS awarded **postdoctoral funding** in two areas: the societal impact of sustainability science and the sustainability transition in higher education. In addition to the postdoctoral funding, seed funding and funding for societal impact were also awarded.

Many HELSUS researchers have participated in workshops focused on working on and contemplating key concepts of sustainability for a book entitled **Situating Sustainability**.



SUSTAINABILITY AND RESPONSIBILITY AT THE UNIVERSITY OF HELSINKI IN 2021 15

MULTIDISCIPLINARY RESEARCH ENTITIES AT HELSUS

Figure 1. HELSUS publications during 2019–2021, co-word analysis, VOSviewer (data: Scopus)

Table 1. Helsinki Institute of SustainabilityScience publications during 2019–2021Source: Tuhat database, 09 August 2022

Type of Publication	2019	2020	2021
Number of scholarly peer-reviewed publications (A, C)	606	736	866
Number of publications focused on public engagement (B, D, E)	266	250	310



AND THE UNIVERSITY HELSINKI I IN 2021

SOLVING CHALLENGES OF SUSTAINABLE URBANISATION AND WELLBEING

Helsinki Institute of Urban and Regional Studies Urbaria conducts and cultivates internationally significant urban research and promotes the societal impact of experts and research in the field. Urbaria operates as part of the Helsinki Institute of Sustainability Science HELSUS. In its first term of operations (2018–2021), Urbaria established a multidisciplinary network as well as several cooperation models and forms of societal impact.

City bikes and sustainable mobility, distributed solar power systems, and the effect of the housing market on inequality as topics of research summaries: The Urbaria Summaries Series is a new online publication of the Helsinki Institute of Urban and Regional Studies, which compiles brief literature reviews and research summaries. The publications are useful for both decisionmaking pertaining to urban areas and stakeholder activities.

Urbaria Support funding was used for preparing and developing multidisciplinary research projects, or increasing the societal impact and stakeholder engagement of urban studies.

Urbaria Postdoc Forum is a multidisciplinary group of postdoctoral researchers in urban studies funded by the cities of Helsinki, Espoo and Vantaa



mombors

members

faculties: Faculty of Biological and Environmental Sciences, Faculty of Arts, Faculty of Science and Faculty of Social Sciences

TOP-LEVEL ATMOSPHERIC AND ENVIRONMENTAL RESEARCH

The top-level research conducted at the Institute for Atmospheric and Earth System Research (INAR) strengthens atmospheric and environmental research in Finland and globally, as well as produces researchbased knowledge for the benefit of society. It maintains and develops a research infrastructure network that provides long-term data on the atmosphere, ecosystems and their interactions.

INAR coordinates **the Atmosphere and Climate Competence Center**, an Academy of Finland Flagship specialising in atmospheric and climate research.

The ClimComp project investigates the climate-related competencies needed in various sectors of society and develops education to meet these needs.



members in the multidisciplinary research community: specialists in physics, chemistry, biology, forest sciences, geosciences, meteorology and the social sciences



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INAR'S FIVE KEY THEMATIC RESEARCH AREAS ARE PROMINENTLY HIGHLIGHTED IN THE VISUALISATION OF A CO-WORD ANALYSIS

Figure 2. INAR publications during 2019–2021, co-word analysis, VOSviewer (data: Scopus)

Table 2. INAR publications during 2019–2021Source: Tuhat database, 08 August 2022

Type of Publication	2019	2020	2021
Number of scholarly peer- reviewed publications (A, C)	235	278	329



HELSINKI INEQUALITY INITIATIVE INEQ

INEQ is a multidisciplinary research community whose researchers produce results that increase understanding of the causes and consequences of intersectional inequalities.



members

faculties: Faculty of Arts, Faculty of Educational Sciences, Faculty of Medicine, Faculty of Science, Faculty of Law, Faculty of Theology and Faculty of Social Sciences as well as the Swedish School of Social Science SUSTAINABILITY AND RESPONSIBILITY THE UNIVERS

SCOPE AND MULTIDISCIPLINARY NATURE OF INEQUALITY RESEARCH HIGHLIGHTED IN THE CO-WORD ANALYSIS VISUALISATION





Figure 3. INEQ publications during 2019–2021, co-word analysis, VOSviewer (data: Tuhat)



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ONE HEALTH - HUMANS AS PART OF NATURE

The One Health approach sees humans as a part of nature, and human, animal and environmental health as interconnected. The HOH Helsinki One Health Network closely collaborates with several government research institutes on topics related to our common health. The network focuses on the interaction between the health of animal and human populations in a rapidly changing environment. Many research topics relate to sustainability, including sustainable animal production and animal welfare, food and water safety, and many other themes of environmental health. In addition, the network's research in Africa touches on themes of sustainable development.

faculties:

Faculty of Veterinary Medicine, Faculty of Pharmacy, Faculty of Medicine, Faculty of Agriculture and Forestry and Faculty of Social Sciences

RESEARCH CONDUCTED WITHIN THE HELSINKI ONE HEALTH NETWORK IS MULTIDISCIPLINARY AND TRANSCENDS SPECIES' BOUNDARIES

Figure 4. HOH publications during 2019–2021, co-word analysis, VOSviewer, data: Scopus

Table 4. HOH publications during 2019–2021Source: Tuhat database, 09 August

Type of Publication	2019	2020	2021
Number of scholarly peer- reviewed publications (A, C)	202	254	296
Number of publications focused on public engagement (B, D, E)	40	45	38



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AN EXPERT IN BIODIVERSITY

The Finnish Museum of Natural History Luomus studies biodiversity and environmental change as well as human–nature interaction.

Data on bee specimens – more than 100,000 cases of specimen data – collected in Finland and the surrounding areas were successfully digitised. The data lays the groundwork for the monitoring of bees and conservation planning. Observations can be browsed at <u>the</u> Finnish Biodiversity Information Facility.

The species-monitoring tools of the Finnish Biodiversity Information Facility, maintained by Luomus, are developed in a way that makes it possible to replicate solutions and promote their reusability. In 2021, tools were developed, in cooperation with the Finnish Environment Institute, for a **bee census** and the **National Butterfly Survey of Finland for agricultural environments**.

The botanic gardens conducted exceptional collaboration to save an extremely endangered type of woundwort (Anthyllis vulneraria subsp. polyphylla) ex situ from the construction of the Jokeri Light Rail line. Seeds were collected for preservation in the seed bank for endangered plant species, and later sown for translocation: **Uhanalaista idänmasmaloa siirtoistutettiin Roihupellon varikolle** – Kestävä Helsinki ('Endangered woundwort translocated to the Roihupelto depot' – Kestävä Helsinki scheme, article in Finnish only).

Lasers used to digitise forests and measure variation in water concentration in trees

Terrestrial laser scanners make it possible to digitise forests, recording the situational picture of the forest in the measured area almost with the precision of individual needles. This information can be used to investigate, among other things, tree structure, biomass, wood quality, the amount of decaying wood and tree vitality.

Read more about the research on the University of Helsinki website.





RESEARCH STATIONS PROVIDE THE FRAMEWORK FOR RESEARCH AND TEACHING IN THE FIELD

The University of Helsinki has eight research stations. They are used to collect long-term measurement data, which are used to investigate changes in the environment. You can explore the operations of our research stations on our **website** and in **the Sustainability Highlights report for 2017–2020**.

> **Climate-friendly food as a tool for environmental education, an experiment:** The goal of the experiment is to establish a climate-friendly approach for the cafeterias of the University of Helsinki's biological research stations, starting from the Tvärminne Zoological Station. In the future, climate-friendly food services will also be used as an element of environmental education. Together with environmental educators, climate awareness can be shared with visiting groups also through food.

CoastClim, a new research centre, brings Baltic Sea and climate researchers together and produces increasingly accurate climate models

To gain a clearer understanding of the connections between the sea and the atmosphere, researchers are combining data from field measurements conducted in the sea, the bottom sediment, the air and a range of habitats.

Read more about the research on the University of Helsinki website.



Research boosts the transition to climate-smart livestock management in East Africa

How are everyday access to food and livelihoods guaranteed to people whose traditional nomadic lifestyle is endangered? A four-year research project aims to increase understanding of the interlinkages between

tropical upland forest cover and semi-arid lowland landscapes as well as the dynamics of their multifunctional agricultural ecosystems.

TACTAL PLACE

Read more about the research on the University of Helsinki website (article in Finnish only).



Mountain forests in Africa hold larger carbon reserves than previously known, but the forests are dwindling at a rapid rate

Researchers found that unexpectedly large quantities of carbon are stored in tropical forests in the mountains of Africa. At the same time, they were surprised by the rapid rate of forest loss in the same areas.

Read more about the research on the University of Helsinki website.



Top-level measurements on the climate effects of agriculture carried out on the Viikki fields

SMEAR-Agri, an internationally unique measuring station, continuously measures emissions and sinks of all three greenhouse gases: carbon dioxide, methane and nitrous oxide.

Read more about the research on the University of Helsinki website (article in Finnish only).





WEEDUCATE EXPER WHO WILLCHANGE THE WORLD

Knowledge and learning are for everyone. Every year, we provide more than 30,000 learners with knowledge and skills that help them tackle global problems. In accordance with our strategic plan, the themes of sustainability will be exhaustively integrated into all education programmes to ensure that the University produces experts who will steer the world towards sustainability and responsibility.

***HELSINKI**

GRADUATES

2,430 first-cycle (bachelor's) degrees

2,439 second-cycle (master's) degrees

408

doctoral degrees

OPEN UNIVERSITY

over 31,000

students pursuing non-degree studies.

Massive open online courses (MOOCs) attracted more than

180,000

students in 2021

MASTER'S



students in the Master's Programme in Environmental Change and Global

77

students in the Master's Programme in Atmospheric Sciences

students in the Master's Programme in Urban Studies and Planning AT THE UNIVERSITY OF HELSINKI IN 2021 31



SUSTAINABILITY EXPERTISE IN CURRICULUM DESIGN

According to our strategic plan for 2021–2030, the goal is to have the theme of sustainability run through our educational offerings. In line with our sustainability and responsibility plan, sustainability expertise will be integrated into discipline-specific knowledge and skills, and generic expert skills. In support of this, **guidelines for sustainability expertise** were drawn up for the Flamma intranet to support the strengthening of sustainability expertise in different fields of science. The Centre for University Teaching and Learning (HYPE) and HELSUS organised workshops for interested parties, which focused on boosting discipline-specific sustainability expertise and disseminated related good practices.

In curriculum design, degree programmes describe the sustainability skills produced and enabled by the programme in terms of the following goals:

- 1. Strengthening discipline-specific sustainability expertise: Degree programmes must identify and define the key sustainability expertise in supporting discipline-specific expertise.
- 2. Developing into a sustainability expert: Degree programmes must ensure that each student has the opportunity to develop into a sustainability expert in their discipline.
- **3. Strengthening sustainability skills as part of generic expert skills:** Degree programmes must describe how the degree supports the acquisition of generic expert skills, which include sustainability skills.

SUSTAINABILITY SKILLS FOR ALL UNIVERSITY STUDENTS REGARDLESS OF THEIR FIELD

The Sustainability Course introduces students to the complexity and multidisciplinary nature of sustainability issues, as well as their ethical and philosophical dimensions. The course guides students to consider their role as future experts and members of society in solving sustainability issues, and provides tools for individual agency.

The main themes of the course: **Global environmental commons**, **human wellbeing and capabilities**, **sustainable and just economies**, **sustainable food systems and healthy nutrition**, **climate change and just energy transitions**, **and urban and peri-urban development**

In 2021, the course was piloted in both the spring and autumn. A total of 270 students from 89 degree programmes took part in the autumn pilot.

Anyone can explore the course materials in the preview version of the Sustainability Course on the **University of Helsinki's MOOC platform**.

Read more about the development of sustainability skills in <u>the</u> <u>Educating sustainability experts blog</u>.



were happy with the course and would recommend it.

"It was very inspiring, motivating, encouraging and constructive how the course combined a range of solution-oriented perspectives and, in particular, how philosophical and ethical aspects were discussed!"

"This has easily been one of the most interesting university courses I have taken! Thank you very much for a fantastic and important course. It's great to finally have it available at the University of Helsinki!"

THE CLIMATE UNIVERSITY DEVELOPS CLIMATE-AND SUSTAINABILITY-RELATED TEACHING AT HIGHER EDUCATION INSTITUTIONS AND GENERAL UPPER SECONDARY SCHOOLS

The Climate University offers free online courses to anyone who wishes to make the sustainability transition happen. The Climate University, developed collaboratively by Finnish higher education institutions, is a network of universities and universities of applied sciences led by the Institute for Atmospheric and Earth System Research (INAR). Its aim is to develop teaching related to the climate and sustainability at Finnish higher education institutions and general upper secondary schools by offering online courses that anyone can complete to develop the skills necessary to transform the world. In 2021, the network expanded and now encompasses 25 Finnish higher education institutions.





In 2021, the Introduction to Inequality Studies course (5 credits) by INEQ was completed by 80 students from several faculties.

The Life Science Expertome platform organised for students a multidisciplinary hackathon on planetary health. The winning team gained the opportunity to present their ideas at Y Science, a side event of the Slush startup event.

The SusEdu expert group of the Faculty of Educational Sciences investigates sustainability teaching from a multidisciplinary perspective. In addition, the Sustainable World Heritage Learning through a Phenomenon-based Approach (SveaSus) project aims to strengthen the understanding of teacher students, teachers and teacher trainers in questions related to sustainable development, and encourage joint action for an increasingly sustainable future.

The Art, Science, Ecology course had internationally esteemed artists as lecturers and workshop instructors. Lectures in the course, which began in the beginning of the year as a collaboration of HELSUS and the Academy of Fine Arts of the University of the Arts Helsinki, are free of charge and open to anyone interested.

As part of the Una Europa partnership, we have established a new educational offering in the field of sustainability. A sustainability micro-credentials initiative coordinated by the University of Helsinki will be published in 2022. The master's level micro-degree is composed of five MOOCs open to all and will initially be available to students of the Una Europa universities. The goal is to open up the opportunity to complete the qualification to all Europeans. In addition, we are involved in the preparation of a joint bachelor's programme in the field of sustainability.

COMPREHENSIVE SELECTION OF SUSTAINABILITY THEMES IN THE COURSE OFFERINGS OF HY+

Understanding the environment – An introduction to current environmental issues: As part of Lahti's designation as the European Green Capital 2021, we designed, in cooperation with the higher education institutions active in the environmental and sustainable development of the Lahti region, an introductory course that broadly opens perspectives on and expands understanding of multidisciplinary environmental issues. The online course is free and open to all.

The Hyvinvointia luonnosta ('Wellbeing from nature')

webinar brought together both research-based knowledge and practical examples from the Lahti region on the effects of nature on wellbeing, particularly from the perspective of children and adolescents. The free-of-charge event was organised as part of Lahti's European Green Capital 2021 project.

Sustainability as an organisational resource:

A multidisciplinary training module focused on sustainable development and responsibility provides the latest researchbased knowledge and concrete tools for applying the principles of sustainable development in individual organisations as well as for leading people and managing strategic planning pertaining to sustainable development in the present. The module combines the human perspective to sustainability thinking in a new and innovative way.

Until the end of 2021, Open University courses were free of charge to people who were unemployed or furloughed. The courses were also **free of charge to students of Helsinki's general upper secondary schools**.


Science education and academic outreach is an important part of the research stations' operations. For example, a science education project at the Tvärminne Zoological Station disseminates researchbased knowledge from a positive perspective and engages the wider public in protecting the Baltic Sea.

The goal of **the Helsinki Institute of Urban and Regional Studies Urbaria's general upper secondary school collaboration with the Eira High School for Adults** was to integrate multidisciplinary urban studies into the general upper secondary school curriculum as well as to strengthen the connection between students with a foreign language background and higher education institutions.The collaboration garnered a lot of praise, and it was incorporated into the operations of the Faculty of Science's Geopiste science class.

The HELSUS Youth project engenders interaction on sustainability themes between HELSUS researchers and schoolchildren. The goal is to increase the accessibility and attractiveness of sustainability research among schoolchildren and other young people in the language of their choice.

The University of Helsinki's science education operations (as part of the LUMA Centre Finland network) and INAR organised the annual international **Teachers' Climate Change Forum**. The event was aimed at teachers of all grades for developing their professional skills. The conference focuses on climate science, climate education and the link between them.

4 (MALITY 104/64/104

10 MILLION

A NEW CHILDREN'S BOOK FAMILIARISES READERS IN BIODIVERSITY

Bug buddies Riikkinen and Oukka return for another adventure in Kadonneen madon jäljillä ('On the hunt for the lost worm'), a new Finnish-language children's book by Jukka Laajarinne and Mari Luoma. The second part of a series of books designed with the science education team of the University of Helsinki introduces children to biodiversity.

Read about the book on the University of Helsinki website.



WE ARE BUILDING A MORE SUSTAINABLE FUTURE TOGETHER WITH OTHERS

The importance of cooperation has been emphasised in the face of urgent and extensive global challenges. As a university, we have the opportunity to make a difference locally, regionally and globally when we collaborate with other parties in society. We are active in the working groups on sustainable development and responsibility operating under Universities Finland (UNIFI) and the Finnish Association of Research Managers and Advisors (Finn-ARMA).





SCIENCE AND ART FROM SUSTAINABILITY

The BioColour research project was involved in **the Sustainable Colour exhibition** of the Craft Museum of Finland, where the dyeing of textiles was explored, for example, from the perspective of sustainable development, and in the Other Kinds of Fashion event of Helsinki Design Week, which created visions of sustainable fashion.

Evergreen Inner Jungle, a week-long exhibition organised collaboratively by Luomus and the Porin kulttuurisäätö collective, explored the tradition of botanic gardens, where distant and exotic plants are brought to the built environment and museum-like conditions.

CarbonTree is an open and interactive online tool that enables anyone to familiarise themselves with carbon fixation in pine forests at different times of the year and in different weather conditions. The website also features a variety of information on how forests bind carbon dioxide. CarbonTree is based on measurements conducted at the SMEAR II station, and the website can be used to monitor in real time the carbon flow of the average pine tree in southern Finland. CarbonTree is part of the Climate Whirl umbrella project, originating in the Institute for Atmospheric and Earth System Research (INAR), which aims to increase public awareness of the forest-atmosphere interaction, as well as to provide a comprehensive and popular understanding of pioneering climate and ecosystem research. The goal of Climate Whirl is to break down boundaries between science, art and education.

UNIVERSITY AS AN ARENA FOR THE SUSTAINABILITY DISCUSSION

The Atmosphere and Climate Competence Center (ACCC), an Academy of Finland Flagship coordinated by the Institute for Atmospheric and Earth System Research INAR, organised in December a multi-day event under the theme of 'Co-designing science-based solutions for safe climate and clean air'. The event reached a total of 1,412 participants from 37 countries. Among other things, the programme included the launching of the ACCC Innovation Forum, moderated discussions with a range of stakeholders, a panel that engaged citizens as part of the Earth Forum event, and a seminar organised by the AASCO project, which promotes sustainable development in the arctic region. Seminar participants included President Tarja Halonen, Prince Albert II of Monaco and Petteri Taalas, Secretary General of the World Meteorological Organization.

The theme of the **Sustainability Science Days** event was 'Destruction and Creativity?'. The virtual event, organised by HELSUS and Aalto University, attracted a record number of 1,000 participants from around the world. Every year, we organise this largest conference in Finland in the field of sustainability science together with Aalto University. <u>The People and Planet conference</u> advanced from theories to solutions for protecting and improving human and planetary health.

In the Papuja pallon parhaaksi ('Beans for the benefit of the globe') public lecture series of the

Leg4Life research project, the focus was on the role of legumes in solving a range of environmental and societal challenges. The topics of the public lecture series in the autumn included food culture and consumers, the quality of animal and plant proteins, and legume policy and the economics of legumes.

EXALT, the Global Extractivisms and Alternatives Initiative research programme, focuses on investigating global extractivism and its alternatives from the perspective of political ecology and the political economy as well as related socioecological crises, such as climate change. **EXALT popularises and communicates on research**, for example, through a **podcast**.





All of HELSUS research seminars continued in virtual form throughout the year: Global South Encounters, Viikki Sustainability Research Seminar, Brown Bag Lunches and Sustainability Discussion Group attracted **more than 650 participants**. You can read more about the seminar themes in the annual report of HELSUS on the **HELSUS website**.

HELSUS researchers attended **side events of the Climate Change Conference in Glasgow and Helsinki**, with topics of discussion ranging from biodiversity and food production to urban climate measures and the role of cattle farming in sustainable food systems.

The Sustainable Urban Systems research groups organises **the Ecosystems and Environment (EcoEnv) seminar series**, where the topic of discussion is topical research in environmental sciences across disciplinary boundaries and future collaboration opportunities.

The Helsinki One Health network organises a monthly research seminar. During the year, seminar sessions discussed several themes related to sustainability, including arctic regions, wildlife populations, animal transport and animal welfare control.

INEQ's international Inequality Talks events were held throughout the year. The talks focused particularly on new kinds of research paradigms and discussion on them: the criticism of capitalism, perspectives of decolonisation and the idea that the focus should be readjusted from the poorest to the increase of wealth among the richest people.

Over the course of the year, a total of 11 blog posts were published in the **Voices for Sustainability blog**.

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In the spring, the Finnish Museum of Natural History Luomus developed online content and offered the first **virtual tours** of the Natural History Museum. Luomus also developed and launched the first virtual tour of the museum's exhibition rooms.

Luomus is involved in **the culture companion scheme of the City of Helsinki**. Culture companions are volunteers trained by the city. The activities are intended for anyone who finds it difficult to attend a cultural event, or who would prefer to attend an event accompanied by another person.



visitors to the public attractions of the Natural History Museum



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SUSTAINABILITY ISSUES HIGHLIGHTED IN UNIVERSITY COMMUNICATIONS

The aim is to harness University communications to highlight sustainability issues. Towards the end of the year, communications focused on biodiversity loss, with a great deal of research-based news published on the theme. Collaboration with the biodiversity loss correspondent of the Helsingin Sanomat daily continued. Biodiversity loss was also the theme of the Giving Day fundraising event in November.

The Solving biodiversity loss series at Think Corner sought solutions for preserving a diverse future. The platform was given to top experts specialised in biodiversity loss, who discussed why preventing biodiversity loss is vital for humanity and how our thinking must change for us to survive in the future. The series reached more than 3,400 viewers.

The Tiedekulmapokkarit ('Think Corner paperbacks') series offers fresh research-based knowledge in an easily approachable form. In the Finnish-language Kuinka maailma pelastetaan? ('How to Save the World') paperback, our researchers examine environmental crises afflicting the world and ways of responding to them.

The University's Utelias mieli ('A curious mind') podcast interviews University researchers who describe the most interesting and inspiring questions in their field.



COOPERATION WITH THE CITIES IN THE HELSINKI METROPOLITAN AREA

In cooperation with the Urban Academy, the Helsinki Institute of Urban and Regional Studies Urbaria organised **multidisciplinary science sparring** as part of the preparations for the strategy of the city council term 2021– 2025 in Helsinki, Vantaa and Espoo. These sparring sessions are a form of interactive research support between researchers and decision-makers that helps the public administration implement knowledge-based policies. Sparring was carried out on themes selected by the municipalities, with sustainability and the wellbeing of children and adolescents in special focus.

Over the course of the year, Urbaria carried out a three-part collaborative project with the Sustainable City programme, coordinated by the Ministry of the Environment and Helsinki Central Library Oodi. The evening sessions included expert discussion on urban themes inspired by literature from the perspective of research.

We renewed **our pledge to the Baltic Sea Challenge**. Cooperation between the University and the city to protect the Baltic Sea enables both long-term co-development as well as new experiments and initiatives.

We joined the City of Helsinki's circular economy cluster. The purpose of the cluster programme is to promote innovation and business activities in accordance with the circular economy. In the early stages, the cluster will focus particularly on promoting the circular economy. In collaboration with the city, we launched a partnership in conjunction with the Kytösuontie demolition pilot and contemplated how research conducted at the University could be utilised in the cluster's operations.



RESEARCH-BASED KNOWLEDGE IN SUPPORT OF DECISION-MAKING

The inaugural HELSUS Science Policy Forum was organised in cooperation with the Ministry of the Environment. The event was attended by roughly 250 people from various government ministries, municipalities, universities and research institutes, discussing current sustainability challenges, ongoing policy processes as well as the intersections and cooperation between research and politics. The topic of the forum was nature-based solutions in support of biodiversity and the mitigation of climate change.

HELSUS published a policy brief entitled **Promoting comprehensive sustainability in strategy work in the Arctic**. The policy paper is aimed at demonstrating, through examples pertaining to Finland, how the different dimensions of sustainability must be taken comprehensively into consideration when drawing up strategies for the Arctic region. In addition to Finnish, the brief was published in English, Swedish, Inari Sámi, Skolt Sámi and Northern Sámi. Researchers from the University of Helsinki are contributing to bringing science and research closer to decision-making as part of **the Expert Panel for Sustainable Development, the Finnish Climate Change Panel and the Finnish Nature Panel.** The panels promote dialogue between research and politics in questions related to sustainability, the climate and the environment, and provide recommendations for the Finnish government. The University of Helsinki hosts the secretariat of the Finnish Climate Change Panel, which also coordinates the communications of the Finnish Nature Panel. In 2021, the primary coordination responsibility for the Expert Panel for Sustainable Development rested with HELSUS.

Specialists from Luomus participated in drawing up Finland's national pollinator strategy. Read more on the **Ministry of the Environment website** (article in Finnish only).

Luomus is contributing its research expertise to a research project whose aim is to provide municipalities with an ecological compensation model for urban planning. Read more about the project on the **University of Jyväskylä website** (article in Finnish only).



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SUSTAINABLE ENTREPRENEURSHIP AND INNOVATION ACTIVITIES

Promoting the food transition: Viikki Food Design

Factory is a home for a new kind of food innovation on Viikki Campus. It brings together food and innovation specialists, and facilitates the creation of sustainable solutions relating to the primary production, processing, distribution and consumption of food.

As the name suggests, Viikki Food Design Factory is a place where new sustainable food and food system solutions are introduced to the world and developed into innovations for the benefit of people and society.

The Germinator pre-incubator brings researcher-based innovation teams and businesses in the food system sector together to germinate inventions into functional solutions for the market. Four teams and solutions were selected for the inaugural Germinator programme: Oleo, CompactGrowth (High-Wire Horizontal Crop), Mäsli and Natinrec. The inventor teams had the opportunity to pitch their solutions at the Y Science side event of Slush.



WE PRESENTED 17 INNOVATIONS FROM DIFFERENT RESEARCH FIELDS AT SLUSH

The innovations included solutions for reducing food waste, enhancing the immune system, advancing teamwork skills, anonymising data, avoiding the generation of air pollution, calculating the carbon footprint and treating brain diseases.

Read more about the innovations on the University of Helsinki website.

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CARBONLINK TO OFFER A NOVEL CARBON FOOTPRINT CALCULATOR

CarbonLink Oy, a business founded in the spring by atmospheric scientists from the University of Helsinki, is designing the first real-time carbon footprint calculator in cooperation with the software company Visma. CarbonLink has as shareholders atmospheric scientists with whom agreements can be made on the latest research findings for the calculator. The business is a University of Helsinki spinout, with the University of Helsinki Funds as a shareholder.

Read more about the CarbonLink business on the University of Helsinki website.



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BUSINESS COLLABORATION RELATED TO SUSTAINABILITY THEMES

In the **HELSUS Co-creation Lab**, master's students complete their master's theses in collaboration with private or public sector partners. The theme of the 2021 Lab was **biodiversity**, with the Ministry of the Environment, Helen, UPM, the City of Helsinki and Kemira as partners. By the end of the year, **21 master's theses were completed in the Lab**.

NEW PROFESSORSHIP IN CHEMISTRY WITH A SPECIAL EMPHASIS ON CIRCULAR ECONOMY AT THE UNIVERSITY OF HELSINKI THANKS TO SUPPORT FROM BUSINESS PARTNERS

The University of Helsinki is taking a significant step towards a more sustainable future by establishing a new professorship in chemistry with a special emphasis on circular economy. Neste, UPM and Borealis Polymers are providing substantial endowments in support of the position.

Read more about the professorship on the University of Helsinki website.

ALCOHOL & CONTRACTOR

READ MORE ABOUT RELATED RESEARCH

Paulig and the University of Helsinki investigate food loss at the beginning of the food supply chain: the timing of the harvest is important

Paulig, an international food industry enterprise, and the University of Helsinki's Helsinki Institute of Sustainability Science HELSUS collaboratively investigated, for the first time, the quantity of food loss generated at the beginning of the food supply chain. Factors relating particularly to harvesting and the processing of harvested crops were identified as causes of loss generated in primary production.

Read more about the research on the University of Helsinki website.

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THE UNIVERSITY OF HELSINKI AND METSÄ GROUP JOIN IN A PARTNERSHIP TO CREATE SOLUTIONS FOR THE SUSTAINABLE UTILISATION OF RENEWABLE NATURAL RESOURCES

The University of Helsinki and Metsä Group have concluded a partnership agreement, under which the parties will advance their research and education collaboration as well as solve global sustainability challenges.

Read more about the partnership on the University of Helsinki website.



INTERNATIONAL COOPERATION

The University's <u>Africa programme</u> emphasises global action, sustainability and responsibility. At the beginning of the year, we launched a strategic partnership with the University of Nairobi. The partnership will focus particularly on the promotion of the One Health concept and food security, as well as the development of teacher training. The programme will introduce new initiatives to increase research and education cooperation, promote inclusion, enhance mobility and support sustainable development in a number of ways.

The One Health Early Career Champions programme of the University of Helsinki and the University of Nairobi promotes the career skills of junior researchers through international mentoring.

Responsibility for coordinating the **UniPID network** was passed on to the University of Helsinki at the beginning of the year. The network of nine Finnish universities supports member universities in integrating perspectives of global responsibility and the Global South into education, research and public engagement, while promoting the universities' international partnerships in support of sustainable development paths.





The University joined **the Global Water Challenge coalition**. The aim is to identify solutions to environmental problems related to water with the help of, for example, artificial intelligence, the internet of things, the 5G standard, cyber security and robotics.

We are active in the sustainability group of the Una Europa alliance. In 2021, Una Europa published its own sustainability strategy. We are also involved in the Ad Hoc Group on Sustainability of the League of European Research Universities (LERU), which drew up a statement on the sustainable investment activities and procurements of universities in 2021.

We are participating in the international Climate Alliance network of universities, whose aim is to identify effective ways of disseminating researchbased knowledge and intensify cooperation with decision-makers and businesses.







SUSTAINABLE THEMES IN ALUMNI ACTIVITIES

Together with our alumni, we constitute the largest network of experts in Finland, and we have the power to change the world.

Under the direction of our expert alumni, our alumni activities focused on, among other things, the management of diversity, themes of sustainability in education, and the effects of climate change.

The Friends of the Environment Fund under the Alumni Fund awarded €2,000 each to nine students writing their master's thesis.

46,125 registered members of the alumni community in 2021

DOCTORS DEMAND A STRICTER CLIMATE POLICY

Environmental crises aggravate diseases and have engendered a need for greener drug development. A professorship in sustainable development in pharmacy and a group of doctors supporting the Elokapina ('Extinction Rebellion') movement aim to solve global problems. A sub-group for doctors has been established in the Elokapina environmental movement.

Read more about the doctors' demands on the University of Helsinki website (article in Finnish only).



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OUR ROLE IN MANAGING THE CORONAVIRUS PANDEMIC

Our researchers are developing, among other things, coronavirus diagnostics, drug therapies and vaccines, as well as helping society to overcome the economic and social effects of the coronavirus crisis. Our multidisciplinary research related to the novel coronavirus is founded on solid expertise in, for example, virology, the study of zoonoses and infections, genetic research as well as the social and educational sciences.

In 2021, the J.V. Snellman Award for contributions to the dissemination of scientific knowledge was awarded to Professor Olli Vapalahti and Associate Professor Tarja Sironen for their distinguished activities as mediators of research-based knowledge. Since the spring of 2020, both of them have concentrated on studying the novel coronavirus while making their expertise available to the media and the authorities. Read more on our **website**.

Students of the Faculty of Medicine were involved in tracing coronavirus infections in the municipalities of the Helsinki Metropolitan Area. In spring 2020, more than 50 students were trained in tracing at the Faculty of Medicine.

UNIVERSITY OF HELSINKI AND UNIVERSITY OF EASTERN FINLAND HOLD SHARES IN A FINNISH COVID VACCINE COMPANY

Rokote Laboratories Finland Ltd, a research-based vaccine company, has been established in Finland to develop and commercialise a coronavirus vaccine administered as a nasal spray. The vaccine is based on research conducted at the University of Helsinki and the University of Eastern Finland.

Read more about the COVID vaccine company on the University of Helsinki website.

READ MORE ABOUT RELATED RESEARCH

A 'biological mask' administered with a nasal spray can protect against coronavirus infection for hours

A molecule developed by researchers at the University of Helsinki can inhibit the functioning of the coronavirus spike protein and appears to offer effective short-term protection against the virus.

Read more about related research on the University of Helsinki website.



SUSTAINABILITY AND EQUALITY IN ACADEMIC DAY-TO-DAY LIFE

Sustainability and responsibility in academic day-to-day life includes the development of administration, efforts related to equality and diversity, the promotion of a carbon-neutral circular economy and biodiversity, as well as responsible investment.

TOWARDS AN INCREASINGLY EQUAL DAY-TO-DAY LIFE AT THE UNIVERSITY: PROMOTING ANTI-RACISM AS THE THEME FOR EQUALITY AND DIVERSITY EFFORTS IN 2021

The goal of the thematic year was to promote the realisation of a thriving study and work culture. Anti-racism denotes active efforts to reduce racism in society. Over the course of the year, we organised training on the topic and participated in the national 'I am anti-racist' campaign. We also promoted linguistic diversity. We will continue to promote these values in close cooperation with students, including the Student Union of the University of Helsinki. There is still much work to be done, and we are grateful for having, in addition to our experts, the University community highlighting practices and structures that produce and maintain inequality.

We organised workshops aimed at providing staff with tools for identifying and addressing racist situations and operating models.

The goal of **training sessions on implicit bias** is to make participants aware of their unconscious biases. By being aware of and understanding personal biases, we can better take into consideration their effect on our work and other people.



EQUALITY AND DIVERSITY EFFORTS AS PART OF EVERYDAY LIFE AT THE UNIVERSITY

The theme of the University's Pride event in 2021 was LGBTQIA+ history in research. The objective of virtual main event was to highlight research on LGBTQIA+ history from the perspectives of various fields of research and give a voice to groups who are not always heard.

The equality and diversity group of the Faculty of Educational Sciences produced an equality and diversity guide for the Faculty's students and staff.

The Maikki Friberg award for efforts to promote equality at the University was given to the AGORA research centre and University Lecturer Mar Cabeza.

We were included in the 'Recognising international talent' pilot programme of the Family Federation of Finland aimed at making work communities increasingly international. During the project, the focus is on developing a language-aware work community, identifying recruitment practices that unconsciously discriminate against people with foreign backgrounds, and integrating implicit bias as a focus area in all recruitment training by HR Services.

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The national HEI LIFE project that we coordinate supports international researchers, employees and their spouses in moving to and settling in Finland.

The University's salaries were reviewed in more detail, to a degree of precision higher than that required by law. In the salary survey, it was found that there does not appear to be any unjustified salary differences between women and men who work in the same or equivalent position at the University of Helsinki. However, the survey revealed that more men than women hold positions at the higher levels of the career path hierarchy, as a result of which men have a higher average salary than women.

We continued the SIMHE collaboration that opens up higher education paths for immigrants. During the year, the first training in academic skills (AKVA training) for immigrants eligible for higher education was also organised. The training was attended by 130 students. The main focus of the training is teaching the Finnish language, in addition to which students are taught study skills, IT skills and English, as well as become familiarised with Finnish society. Career guidance provided to students constitutes a significant part of the programme.





WE PAY ATTENTION TO THE WELLBEING OF STUDENTS AND STAFF

1,961 kilometres: The amount of kilometres travelled on the University's day of outdoor exercise, spent in stormy weather, equalled a journey from Helsinki to the Kilpisjärvi Biological Station and the Värriö Subarctic Research Station, and then further on to the Oulanka Nature Centre.

The work community award was presented to UniSport, with honorary mentions given to the Ruralia Institute, the Faculty of Educational Sciences, the Laboratory Animal Centre and the equipment maintenance team at Laboratory Services.

In a project to develop student guidance, supervision and wellbeing, we are creating new **low-threshold forms of support for students** and clarifying current guidance and supervision processes to make it easier to direct students to receive the appropriate support. **A student wellbeing project** is being carried out as part of the project, aimed at, among other things, identifying students who have veered off their study path and those in danger of doing so to offer them targeted support and guidance to the appropriate services.

The Towards Better Wellbeing and Studying course is

aimed at improving students' wellbeing and learning skills.

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SUSTAINABILITY IN INTERNATIONAL EDUCATION COLLABORATION

Students are encouraged to get international experience during their studies by, for example, embarking on an exchange or traineeship abroad. In addition, we welcome more than 1,000 exchange students every year. The International Exchange Services and Education Cooperation unit has initiated the drawing of guidelines for students on sustainability and responsibility. The goal is to instruct and advise both outgoing and incoming exchange students to act responsibly during their exchange periods. In addition, green mobility is one of the key goals of the current programme period of the Erasmus+ programme funded by the European Commission. Virtual exchange opportunities are being created alongside traditional exchange periods that require physical travel. The goal is to publish the guidelines for students and to implement the first exchange periods entitling students for a Green Mobility grant in 2022.



A CARBON-NEUTRAL UNIVERSITY BY 2030

In our strategic plan, we have set the goal of becoming **carbon neutral by 2030**. We wish to be a leader in sustainability and responsibility, which sets the standards high in terms of carbon neutrality. In the autumn, we launched the planning of **the carbon-neutral University 2030 roadmap**. The goal of the project is to calculate and determine the University's carbon footprint, introduce focus areas for reducing climate emissions as well as investigate and develop a range of compensation models. One task in the project is to identify the positive climate impact of the University, also known as the carbon handprint.

We manage property assets whose scope is roughly 750,000 gross square metres. We are one of the 15 largest property owners in Finland.

In the course of the year, we initiated a project to **redesign travel management**, with supporting the achievement of carbon neutrality at the University as one of the goals.

Our carbon footprint in 2021 was 31,937 t CO2e, including the climate emissions generated by the energy use of University buildings as well as air and train travel. The calculation covers Scopes 1 and 2 of the Greenhouse Gas Protocol Corporate Standard for the delivered energy and fuels of buildings owned by the University of Helsinki Group and Kiinteistö Oy Biomedicum Helsinki, and Scope 3 for air and train travel emissions in accordance with the report by the contract travel agency.



SUSTAINABILITY AND RESPONSIBILITY AT THE UNIVERSITY OF HELSINKI IN 2021

Total energy consumption grew by 12% compared to 2020, as a cold winter increased the demand for heating.

Water consumption decreased by roughly 6% compared to 2020, partly explained by the increase in telecommuting.

Heat consumption increased by 19% due to the colder winter season, while the weather-corrected heat consumption decreased by a little under 9%.

Measures taken to improve energy efficiency in University properties implemented in 2021 amounted to a savings of **2,002 MWh**:

- Renovation of the old side of the Main Building
- Introduction of geothermal heating at Info Centre Korona in Viikki
- Redesign of the technical building systems in the Viikki Teacher Training School

Solar panels were installed on the roof of Chemicum. Previously, solar panels have been installed at both Viikki Campus and the City Centre Campus.

In 2021 a total of 3,109 MWh of renewable heat and electricity was produced in connection with University buildings, which is equivalent to approximately 1.6% of the energy consumed in all University buildings. The annual output of the solar power plants installed in University buildings was **890 MWh**. Our goal is to generate at least 5% of the energy used in University buildings in a renewable way on site.

A total of **40%** of the electricity consumed was produced by solar, wind or hydropower.



Carbon footprint in 2019–2021, t



DEVELOPMENT OF THE CIRCULAR ECONOMY AND WASTE SORTING AT THE UNIVERSITY

Attempts were made to raise the University's recycling rate by making sorting categories increasingly clear. In 2021 the new waste sorting model was introduced in a handful of properties. New sorting containers were introduced, and opportunities for sorting plastic packaging were increased.

The amount of waste from facilities decreased by **0.5%** from 2020.

The amount of mixed waste decreased by 15% from 2020.

- The amount of biowaste decreased by 14%
- Share of mixed waste, 45%
- Mixed waste was incinerated at Vantaa Energy's waste-toenergy plant, where it was used to produce electricity and district heating.

Our waste recovery rate is close to 100%, while the average for educational institutions is approximately 70%. This is mainly thanks to the waste-to-energy plant of the Helsinki Region Environmental Services Authority HSY, where mixed waste is incinerated to produce energy. The waste recovery rate was clearly higher than **the recycling rate, which was roughly 54%**.





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A circular economy specialist at the University of Helsinki Property Services (HY247) is developing new solutions for the reuse and recycling of furniture in particular. In conjunction with dismantling and emptying the premises at Kytösuontie, furniture that was no longer needed by the University was sold for further use through the Kiertonet service. **More than 520 pieces or sets of furniture** have been sold through Kiertonet. **More than 10 tonnes of furniture and fittings** were donated to charity to be restored and for subsequent further use. Nonsaleable or broken furniture were recycled as materials.

- Since 2019, the University of Helsinki IT Centre has operated a **centralised recycling service for the responsible recycling and disposal of IT equipment and devices**. We sort recyclable equipment into equipment to be sold on the aftermarket and recyclable raw material.
- In 2021, a total of roughly 1,300 pieces of IT equipment ended up on the aftermarket, while roughly 11.5 tonnes of IT equipment ended up as raw material. The coronavirus pandemic caused problems related to the availability of new IT equipment, which made it necessary to extend the lifespan of devices. Naturally, this decreased the recycling figures compared to previous years. However, carbon dioxide emissions were reduced in the case of equipment directed to the aftermarket to the tune of nearly 300 tonnes.

A laptop library is available to degree students and staff of the University where they can borrow laptops.

DEVELOPMENT OF CYCLING ARRANGEMENTS ON THE CAMPUSES

We support carbon-neutral commuting by improving the preconditions for cycling. In the autumn, a locked bicycle parking facility was introduced at Haartmaninkatu 3. The facility has racks for storing 30 bikes and a charging station for electric bikes. In the first stage of the renovation of Info Centre Korona in Viikki, more shower and dressing room facilities as well as locker cabinets for storing cycling equipment were built. In the renovation of the old side of the Main Building, the bicycle parking area in the courtyard was remodelled, and a shower facility was reserved for staff. In Viikki, the planning of locked bicycle parking facilities was initiated.

During the summer and winter kilometre challenge, members of the University community cycled a total of more than







CAMPUS FARMING ON ALL OUR CAMPUSES

An association was established in the spring to organise on-campus farming. The farming boxes on the City Centre, Kumpula and Viikki Campuses were actively used. In Meilahti, the farming area was not in use due to yard repairs. As part of the work, the area was redesigned through the purchase of new farming boxes.

A FAIRTRADE UNIVERSITY

We reactivated our Fairtrade university activities by seeking new members for the Fairtrade university team. During the year, enthusiastic team members organised, among other things, a panel discussion focused on the effects of climate change manifested at the dinner table and a Fairtrade coffee break. The team actively communicated on Fairtrade themes and conducted among the University community a survey on the use of products with a responsibility certificate. The team is composed of representatives of University Services, research and teaching staff as well as students. The work is carried out in cooperation with the Student Union and restaurant operators.

We are committed to promoting the use and availability of Fairtrade-certified products in our procurement, as well as increasing the University community's awareness of Fairtrade and its significance to global production and consumption networks.

> We serve only vegan food at receptions and celebrations organised by the University. The vegan offerings apply to University hospitality, including receptions offered by the University to conferences and other celebrations, such as the University's anniversary celebration.





WE TAKE RESPONSIBILITY EXTENSIVELY INTO CONSIDERATION IN PROCUREMENT

The University of Helsinki supports sustainable development and social responsibility in procurement and wishes to ensure that all products and services procured have been produced in socially responsible and environmentally sustainable conditions. To this end, the University has established **minimum responsibility criteria (PDF)**.

In our sustainability and responsibility programme, we pledge to develop the reporting of carbon dioxide emissions related to procurement by procurement category and continually monitor reporting by suppliers.

A RESPONSIBLE UNIVERSITY INVESTOR

The goal of our investment activities is to support not only our academic duties financially but also our efforts to promote the sustainable development of society.

The University complies with its principles for responsible investment activities, which are founded on the principles for responsible investment supported by the United Nations and pertain to matters related to the environment, social responsibility and corporate governance in terms of investments.

The year 2021 was the first in which all the University's investments were allocated in accordance with our new principles for responsible investment. **Responsible investments generated a 24% return for the University of Helsinki in 2021**.

FINNFUND AND THE UNIVERSITY OF HELSINKI TO INVEST IN MICROFINANCING IN AFRICA AND ASIA

The investment will be used to grant loans to small businesses. The goal is to promote responsible practices and gender equality in financing.

Read more about the investment on the University of Helsinki website.

THE UNIVERSITY OF HELSINKI ESTABLISHED HELSEED, AN ENDOWMENT FUND THAT INVESTS IN STUDENT STARTUPS – THE CO-OPERATIVE TRADEKA BECOMES AN ANCHOR INVESTOR

Launched in spring 2020, <u>the HELSEED entrepreneurship</u> programme aims to inspire students to develop their ideas into startups. The University of Helsinki has created a new endowment fund aimed at making early investments in startups established by students.

Read more about the HELSEED endowment fund on the University of Helsinki website.

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OPERATIONS OF THE NATIONAL LIBRARY OF FINLAND SUPPORT SUSTAINABLE DEVELOPMENT

The operations of the National Library of Finland support many Sustainable Development Goals already in principle, particularly from the perspective of cultural and social sustainability. The core duty of the library is to strengthen cultural and linguistic diversity as well as to promote free research, democracy and freedom of speech. In 2021, the first sustainable development programme of the National Library was published in three languages. It describes the different levels of library operations in relation to various aspects of sustainability.

The library's diverse stakeholders have shown interest in the library's work for sustainable development. Specialists from the library took part in the discussion of the cultural heritage field on, among other things, the relationship between the digital transformation and ecological sustainability at a discussion panel of the Europeana 2021 conference and at the National Libraries Now conference.

Boldly towards sustainable change – Sustainable development in the National Library of Finland 2021–2030

THE HELSINKI UNIVERSITY MUSEUM INVITES PEOPLE TO RECOGNISE HOW SCIENCE AND RESEARCH ARE PART OF LIFE

The Helsinki University Museum is a memory institution that preserves and presents the history and cultural heritage of the University of Helsinki as well as research and education in the University's various disciplines. The museum has three public attractions – the Helsinki Observatory, the Art Room and the exhibitions on display in the University's Main Building – as well as unique collections.

The Helsinki Observatory carried out diverse outreach work aimed at inspiring schoolchildren in particular to engage in the natural sciences. The art instruction provided at the Art Room builds a connection between science and art, fostering education. During the coronavirus pandemic, free online content was produced at the observatory and the Art Room to support people's wellbeing. For example, the content of the Art Room's quarantine art course was utilised more than 9,000 times in 2020, and was still accessed more than 2,000 times in 2021.

The Helsinki University Museum is contributing to the renovation of the University's Main Building as an expert organisation in art and cultural heritage. In the renovation of the old side of the building, completed in 2021, matters of diversity were taken into consideration in selecting the artworks to be displayed and the naming of the facilities. At the request of the rector and vice-rectors, more works depicting academic women and more works by women are on display than before. The portraits also feature people representing sexual minorities.



READ MORE ABOUT OUR SUSTAINABILITY AND RESPONSIBILITY EFFORTS:

University of Helsinki website

Sustainability and responsibility webpage Sustainability and responsibility reports and plans Annual review 2021 (PDF) Helsinki Institute of Sustainability Science HELSUS HY247 sustainability and responsibility reports (in Finnish only)

GIVE FEEDBACK ON THE REPORT!

Do you have something in mind that you would to see highlighted in the next report? Let us know by filling out an **electronic form**.

UNIVERSITY OF HELSINKI