



SUSTAINABILITY REPORT

AALBORG UNIVERSITY 2019-2020

IN BRIEF

Sustainability at Aalborg University

Aalborg University was founded in 1974 and is the result of a partnership of the region, business community and educational institutions that share a common desire to ensure the sustainable development of the North Denmark Region. Sustainability has always been an implicit focus of research and education in all faculties at Aalborg University where the fundamental principle is that research and education should benefit society.

Aalborg University has three campuses in Denmark: Aalborg, Esbjerg and Copenhagen. More than 20,000 students are enrolled at Aalborg University, 10 percent of whom are international students from all parts of the world. The university employs 2,200 academic staff and 1,300 administrative and technical staff, and the university is one of the largest employers in the North Denmark Region.

The problem-based approach is a fundamental part of all activities at the university. Since its inception, teaching at Aalborg University has been focused on project work in groups where the project work is interdisciplinary and centred around a problem. This is called "The Aalborg Model". For example, projects on alternative energy have included wind turbines and bio-

gas plants. This type of work undoubtedly contributes to Aalborg University today having the world's leading and most-cited researchers in the field of energy. Right from the beginning, students in the social sciences worked with social and economic inequality and its impact on society. Research in the social sciences is currently addressing issues such as inequality, poverty, social inclusion, migration, sustainable economic growth, decent jobs, as well as sustainable management and business development.

In 2020, after broad consultation and support among staff and students, sustainability is now an explicit focal point for AAU operations. This is formally expressed in the Aalborg University [Policy](#) on Balanced and Sustainable Development.

This report reviews the progress that AAU has made in contributing to sustainable development in the reporting period 2019/2020.

The report covers examples of AAU's sustainability activities and as such, the report is not an exhaustive review of every aspect of AAU's sustainability-related activities and achievements.



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RESEARCH



ENGAGEMENT



TEACHING



OPERATIONS

FOREWORD BY THE RECTOR AND PRO-RECTOR

Aalborg University and the world's most important plan

2019 and 2020 have been two remarkable years that clearly demonstrated that we live in an interdependent world and that we need sustainable and balanced development.

The UN Sustainable Development Goals represent an unprecedentedly ambitious and transformative development agenda. The adoption of the SDGs is a call to action for a new plan on how to restore the balance between humans and planet Earth if we want to ensure that future generations live in a healthy world.

Universities and other higher education institutions have a critical role in helping society fulfill this important plan through their research, teaching, campus operations and leadership.

In December 2019, the Danish Parliament reached a broad political agreement on a climate law that will ensure that Denmark reaches the ambitious goal of reducing greenhouse gas emissions by 70 percent in 2030 compared to the level in 1990. Aalborg University (AAU) is actively contributing to achieving this goal through research activities; broad partnerships with private industry, public sector authorities and the civil sector; and providing support to the Danish government by serving on various advisory committees.

In 2020, the world was hit by a global pandemic caused by the coronavirus. It became very clear to all of us how mutually dependent we are and how important cooperation is in surmounting a worldwide crisis. In March 2020, when the pandemic shut down Danish society, researchers across faculties at AAU immediately embarked on projects that could mitigate the consequences of the pandemic.

The Danish Prime Minister locked down Denmark on 11 March 2020. In the days following, a research group at the AAU Faculty of Engineering and Science postponed their current research project and collaborated with Statens Serum Institut on genetic sequencing of viruses in all Covid-19 positive cases in Denmark. Their work is a central element in the fight against coronavirus.

Similarly, a research group at the AAU Faculty of Medicine along with industry partners developed an emergency ventilator and shared the entire technical specification with the world as open source. Another research group at the AAU Technical Faculty of IT and Design along with colleagues from other universities developed mathematical models to advise the Danish national health authorities on the impact of various measures to prevent spread of the virus.

Finally, research groups at the AAU Faculty of Social Sciences and the AAU Faculty of the Humanities have conducted research projects to examine the impact of Covid-19 on the work environment, the consequences of the pandemic for work organisation and our mental health as well as how expanded digitalisation during the crisis has shaped Danes' everyday lives. All of these examples make clear that university research is helping society navigate the Covid-19 crisis.

We are proud of the fact that our university staff across disciplines have stepped in and made a significant effort to assist society in getting through the crisis. This effort illustrates that universities can and do play a key role in supporting society with a sustainable way forward.



Per Michael Johansen
Rector



Inger Askehave
Pro-Rector

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We are proud of the fact that our university staff across disciplines have stepped in and made a significant effort to assist society in getting through the crisis.

Per Michael Johansen and Inger Askehave



1 NO POVERTY



74
PUBLICATIONS

End poverty in all its forms everywhere.

CISKO

The research group [CISKO](#) at the Department of Sociology and Social Work investigates how vulnerability is expressed in children, young people and families, as well as the underlying causes and mechanisms that create and maintain vulnerability. This focus includes research on the mental health and social well-being of children and young people, conditions of children and young people with disabilities or chronic illness, and research on living conditions of vulnerable families, such as the consequences of poverty and social inequality.

FLOW

The research project [FLOW](#) led by the Department of Politics and Society focuses on global flows of migrants and their impact on Northern European welfare states, including climate migrants. FLOW's mission is to provide basic research on migration flows and consequences as well as application-oriented research regarding the ways the socio-economic and socio-cultural integration of immigrants may be improved in developed welfare states.

As part of the international project [The State of the Street](#), FLOW heads the study [Making Asylum: Life in a Suspended State](#) which examines the perspective of asylum-seekers, investigating their lived experiences in different types of reception settings. During the suspended state of having left behind their normal life and not yet belonging to the new state, this project aims to elucidate how socio-cultural understanding, identification, and potential integration (or return) of asylum-seekers is informed by such a suspended state.

CENTER FOR YOUTH RESEARCH

At the Department of Culture and Learning, [CeFu](#) focuses on the growing dissatisfaction among Danish young people. The project contributes with research-based answers to questions of increasing societal interest, such as why more and more young people are affected by mental dissatisfaction and the risk of vulnerability, including poverty. It has been thoroughly demonstrated that social heritage is crucial for young people's level of education, life chances and well-being. However, recent studies suggest that vulnerability is changing expression and that middle-class youth are increasingly being affected. New forms of vulnerability require new opportunities for positive change in the form of initiatives and approaches that support experiences of life mastery among young people in vulnerable positions.

SPATIAL DECISION SUPPORT SYSTEMS IN SERVICE OF THE SDG'S

At the Department of Planning, [this project](#) focusing on Spatial Decision Support Systems looks at financial inclusion in sub-Saharan Africa through Earth Observation. This includes designing systems for better planning of mobile money agents, physical banking locations, optimisation of agent-networks and an overall mapping of who is serviced by the formal financial sector in sub-Saharan Africa. A major part of the project is to identify who is excluded from the formal economy and to develop business models for financial service providers in order to create new opportunities and incentivise the private sector to take the lead in financial inclusion.

INTERNATIONAL COLLABORATION FOR IMPROVED STUDENT LEARNING AND EMPLOYABILITY

As part of the strategic ERASMUS+ partnership [EPIC](#) (Improving Employability through Internationalisation and Collaboration), researchers and students from AAU take part in international collaborative projects, such as the [Global Student SDG Challenge](#).

One of the [specific problems](#) that students from different universities have partnered on solving is located in Brazil. When the world's second largest dumpsite just outside Brasilia was closed and replaced by a modern recycling centre, it was a huge step forward for the city of millions in terms of waste disposal. However, for the nearly 1000 children and adults who survived by trash-picking, it was a disastrous loss of livelihood. Students participate in different projects to support the locals who lost their livelihood to the new recycling centre. This includes a [mobile education platform](#) and [IoT waste management](#).



> Project team in Brasilia

SOCIAL WORK (MSC, AAL/CPH)

As the only one of its kind in Denmark, the Master's programme in [Social Work](#) deals with a variety of social problems, such as poverty, abuse, cultural clashes, mental health problems and long-term unemployment. Students acquire a scientific theoretical and methodological foundation enabling them to carry out research, analysis, evaluation and development tasks in social work areas. During their studies, students are introduced to various aspects of poverty, and in 2019, two Master's students focused on the [social impacts of receiving unemployment benefits](#), and how this affects the opportunities for recipients to regain or begin employment.

AFFORDABLE STUDENT HOUSING

With campuses in three cities in Denmark, AAU works with local authorities and housing associations to ensure affordable housing for students. In Aalborg, the local [Roof overhead guarantee](#) by Aalborg municipality guarantees all new students in Aalborg temporary housing for three months if they have not yet found housing on their own. Aalborg municipality also provides financial support during this temporary housing period to ensure that all students can afford living in Aalborg until they obtain permanent housing. In addition, the [International Accommodation Office](#) at AAU offers furnished accommodation for internal staff and students.



2 ZERO HUNGER



89
PUBLICATIONS

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

GRASS4FOOD

Globally, agriculture urgently needs to reduce its climate and environmental impact. There are several paths towards that goal, but one is to focus on the production of sustainable protein sources. In Europe and Denmark, there is increasing focus on self-production of proteins, not only regarding security of supply, but also reduction of soy imports from South America where there is extensive deforestation and the use of problematic chemicals. Here, protein from grass is an attractive alternative. In the project [Grass4Food](#), AAU experts at the Department of Chemistry and Bioscience are researching methods to make green biorefining more effective. As the industry and consumers increasingly demand sustainable, climate-friendly and plant-based food, this could become an important solution in future feed and food production.

DANISH NUTRITION SCIENCE CENTRE

The new [Danish Nutrition Science Centre](#) (DANSC) at the Faculty of Medicine was established as an international knowledge hub focused on nutrition, diet and health for both ill and healthy people. The centre is a collaboration of Aalborg University Hospital and the North Denmark Region, and was established to create synergy between research and educational activities with regard to disease-related malnutrition through three research platforms: experimental nutrition, clinical nutrition and applied nutrition.

DEVELOPMENT OF NATIONAL MALNUTRITION GUIDELINE

Since 2017, the Faculty of Medicine, in collaboration with the Danish National Board of Health, has developed a [national guideline](#) for tracing, preventing and treating malnutrition at hospitals, institutions and general practitioners in Denmark. This guideline will lead to implementation of nutritional initiatives in the Danish healthcare system.

BIOTECHNOLOGY (BSC, AAL)

During the interdisciplinary Bachelor's programme in [Biotechnology](#), students are introduced to biology, chemistry, process technology, and engineering science. Combining biology and technology, this study programme enables students to develop new solutions to some of society's greatest challenges, including bio-energy, health, and food. This approach includes developing new technology that can improve food production, nutrition and other food-related aspects.

THE NORDIC NUTRITION ACADEMY

The [Nordic Nutrition Academy](#) (NNA) is an education programme for doctors, nurses or dietitians who are interested in disease-related malnutrition and research. The goal is to increase nutrition-related skills in healthcare and research, to create networks between experienced and less experienced clinicians/researchers, and to integrate clinical work with research. Professor Henrik Højgaard Rasmussen of the Department of Clinical Medicine is one of the coordinators of the NNA.

DANISH SOCIETY FOR CLINICAL NUTRITION

The [Danish Society for Clinical Nutrition](#) (DSKE) brings together doctors, nurses, dietitians, researchers and other stakeholders in clinical nutrition. The purpose of the society is to prevent and treat disease-related malnutrition. Professor Henrik Højgaard Rasmussen of the Department of Clinical Medicine is the Danish representative in the largest clinical nutrition society in the world, [ESPEN](#), working to fight malnutrition globally.

ONCA DENMARK

[ONCA Denmark](#) is a multi-stakeholder organisation aiming for optimal nutritional care for all. The organization is based on a public-private partnership with emphasis on collaboration across disciplines. Professor Henrik Højgaard Rasmussen of the Department of Clinical Medicine is president of ONCA Denmark. ONCA Denmark works closely with the international main organization of ONCA where mutual inspiration and knowledge sharing support holistic approaches to ensuring optimal nutritional care for all.

FOOD POLICY AT AAU

The [food policy](#) at AAU aims to ensure that all staff members have access to a staff kitchen or lunch room with appliances and equipment that enable staff to bring food. It is considered a minimum that all staff members have access to refrigerators as well as the option of heating and washing food. Furthermore, in several locations at AAU, it is possible to eat various meals in the canteens on the university campus. Several departments at AAU also have fruit arrangements where staff members are offered one piece of fruit per day.

COMMUNITY GARDENS

In the green areas of AAU, the new [Community Gardens project](#) was established to provide staff and students the opportunity to have small urban gardens on the AAU Campus. Staff and students can rent plant boxes to grow their own herbs, flowers and trees.



› Community garden at AAU Campus Aalborg East



3 GOOD HEALTH AND WELL-BEING



 **2747**
PUBLICATIONS

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

THE FACULTY OF MEDICINE

The [Faculty of Medicine](#) is committed to ensuring good health and well-being, and with the [2030 Vision](#), the faculty aims to be a leader in digital health, and for doctors and engineers to find solutions together. The faculty has several research centres dedicated to different aspects of good health and well-being in conjunction with local, national and international healthcare providers. This includes, but is not limited to, the [Danish Centre for Clinical Health Services Research \(DACS\)](#), the [Danish Centre for Healthcare Improvements \(DCHI\)](#), the [Sport and Social Issues](#) group (SSI), and the [Research Centre for Sexology \(SeFo\)](#).

During the past 10 years, a partnership of the Faculty of Medicine, the North Denmark Region, and all municipalities in the Region has culminated in large-scale [telecare research projects](#) that are now being continued in routine care for patients with chronic non-communicable diseases in the Region.

The Faculty offers the [Medicine programme](#) to train the future doctors of Denmark. The Faculty also offers the [Medicine with Industrial Specialisation programme](#) which provides students with skills to develop and distribute pharmaceutical drugs. In addition, the [Public Health programme](#), also offered by the Faculty, focuses on developing, implementing and evaluating strategies and initiatives for prevention and promotion of good healthcare practices.

MICROSCOPIC WORM PROVIDES USEFUL KNOWLEDGE ABOUT AGEING

The world's population is getting older, and more people will thus suffer from age-related conditions such as Parkinson's and Alzheimer's disease in the future. Using a [microscopic worm](#), researchers at the Department of Chemistry and Bioscience are investigating why we age and how we can prevent and treat age-related illnesses.

ISOBEL

The [ISOBEL](#) (Interactive Sound Zones for Better Living) project is a partnership of the Department of Computer Science and the Department of Electronic Systems, B&O, Wavacare and Sound Focus. The project will develop an interactive sound zone system, responding to the need for sound exposure control in dynamic real-world contexts, adapted to and tested in healthcare and homes. The aim is to improve care and reduce hospital time, and to support well-being and preventive care in homes.

THE CULTURE OF GRIEF

The research centre [Culture of Grief](#) at the Department of Communication and Psychology studies grief experiences as well as the cultural setting and conception of happiness and distress that situate grief in our time. The focus on grief will lead the way for a wider analysis of the human condition in our culture. Research on grief will also benefit from reflection on the embedding of grief in the cultural setting. The ambition is to establish an internationally leading research environment on grief addressing the most substantial psychological, cultural and clinical aspects of grief.

COVID-19 ACTIONS

During the COVID-19 pandemic, AAU initiated several projects to support Danish and international efforts in understanding and managing this pandemic. Examples:

At the Department of Chemistry and Bioscience, researchers are working with Statens Serum Institut to [map the genetics of all COVID-19 cases in Denmark](#). Such gene sequence analysis of viruses in the context of epidemiological studies is a powerful tool. This has already provided valuable insights to support the management of COVID-19 in Denmark.

At the Department of Health Science and Technology, researchers are [mapping the symptoms of COVID-19 in Denmark](#) by using the Navigate Pain software. The data collected will provide a unique picture of COVID-19 in Denmark, and in the future may be used in developing vaccines or forecasts for other epidemics.

The Vice Dean for Education at the Technical Faculty of IT and Design, Jakob Stoustrup, is heading a [project for estimation, simulation and regulation for optimal interventions against COVID-19](#), funded by the Novo Nordisk Foundation. The project will develop a decision support tool for the Danish authorities.

At the Department of Politics and Society, researchers are supporting eldercare workers and managers in [managing COVID-19 in Nordic eldercare](#) through knowledge sharing and guidelines based on initial experiences.

At the Department of Computer Science and the Department of Electronic Systems, researchers are, in a project funded by the Poul Due Jensen Foundation, contributing to a [decision-making tool for the Danish government](#) in managing lockdowns and re-openings of Danish society by drawing on AAU's super computer that applies massive parallelism to enable simulation of highly complex scenarios.

STUDY AND WORK ENVIRONMENT

Physical work and study environment: At AAU, continuous assessment of the quality of both [work](#) and [study](#) environments is key to providing the optimal physical conditions for research, teaching and learning. At Campus Service, attention is given to [safe use of equipment and chemicals in laboratories](#), as well as the overall work and study environment, including ergonomic furniture, proper lighting and ventilation etc.

Psychological work and study environment: To support a healthy psychological [work](#) and [study](#) environment at AAU, several options are in place to support staff and students when they are struggling either in relation to work, studies or in their personal life. This includes Coaching Centres and Counsellors for students and a [partnership with Dansk Krisekorps](#) for staff.

SPORT AND FITNESS AT AAU

To support the health and well-being of staff and students, AAU offers different [sport and fitness activities](#) in all campus cities, including [AAU fitness centres](#), [student sports association \(AASI\)](#), [staff sports association \(AUI\)](#), [UniRun](#), [golf tournament for staff](#), and a [multifunctional activity and outdoor fitness area](#) on the AAU Aalborg East Campus.



4 QUALITY EDUCATION



84 PUBLICATIONS

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

PROBLEM BASED LEARNING

The [UNESCO Centre for Problem Based Learning \(UCPBL\)](#) is at the core of the [Problem Based Learning Model](#) at AAU. The Aalborg Model of PBL provides the foundation for AAU to enable students to learn through addressing authentic problems, and has become nationally and internationally recognized. The Aalborg Centre encompasses the [UNESCO Chair in Problem Based Learning](#) that was established in 2007 and is renowned for its accomplishments in supporting the development of Problem Based and Project Based Learning in Engineering Education.

The dedicated [AAU PBL Academy](#) and the [AAU Learning Lab](#) focus on ensuring excellence in higher education teaching and learning through courses, workshops and seminars for AAU staff to develop competencies, skills and pedagogical knowledge, and overall support research, networks and communication.

At UCPBL, the research project [PBL Future](#) aims to develop research-based directions for problem- and project-based learning in a digital age. This project will re-conceptualise how PBL could operate in new formats, based on the core principles of PBL, while exploring and developing new digital approaches that operate in and facilitate new hybrid PBL learning models.

MEGAPROJECTS

What do a computer scientist, a business economist and a techno-anthropologist have in common? At AAU, the answer is: a great deal. We know that major problems are often best solved in interaction between different disciplines. We are therefore taking our well-integrated PBL model to a new level with [megaprojects](#). The megaprojects aim to provide interdisciplinary solutions to current sustainability and societal issues – in Denmark and the rest of the world. Megaprojects will contribute to solving sustainability challenges and problems jointly, at AAU, across campuses, as well as across universities and national borders. Three megaprojects are running that focus on different sustainability challenges: [Simplifying Sustainable Living](#), [Better Together](#), and [the Circular Region](#).

THE GLOBAL HISTORY OF THE OECD IN EDUCATION

The field of education is characterised by two very influential agendas – inclusion and testing. While testing is rooted in ideals of keeping schools, teachers and students accountable for their results and measurable degrees of success, inclusion is about creating an educational system that can support access to education and learning for all students. The purpose of this international [research project](#) at the Department of Culture and Learning is to map and analyze this dilemma, to determine what it means for possible access within the education system, and present solutions for improvements.

BUILDING STRONGER UNIVERSITIES

The project [Building Stronger Universities III](#) brings together researchers from AAU, Copenhagen University, the University of Southern Denmark, and Roskilde University, to support several African universities in strengthening research and teaching infrastructure. The projects emphasise close links between teaching and community outreach through collaborative action research.

QUALITY ASSURANCE AT AAU

The [quality assurance policy](#) for study programmes at AAU ensures that the work relating to quality assurance and quality development of the university's study programmes results in the fulfilment of the objectives described in the university's quality assurance policy for education. The system provides information and determines procedures for the management of information and requirements for documentation related to study programmes. This ensures the foundation for further development as well as continuous quality control. In addition, each study programme is self-evaluated every three years through a self-evaluation process, drawing on external experts, which provides an overall evaluation of quality and relevance. Based on this process, relevant development initiatives are launched.

IT AND LEARNING DESIGN LAB

The activities and the facilities of the [ILD Lab](#) are anchored in AAU Copenhagen, and its members represent two departments: the Department of Learning and Philosophy ([L-ILD](#)) and the Department of Communication and Psychology ([K-ILD](#)). The researchers, students and partners develop new and innovative learning processes using IT, and provide a necessary research contribution to digital development, corresponding to trends in primary and higher education.

One of the research projects at the ILD Lab, entitled [Stories from the North](#), focuses on enabling young people from Denmark, Iceland and Norway to share digital stories. Branding is no longer about the stuff you make, but about the stories you tell. The vision of the project is to let young people create, share and tell life stories through the [Nordic Storytelling Labs](#) and an online digital storytelling platform.

UPPER SECONDARY TEACHER TRAINING

AAU offers students the opportunity to tailor their university degree to qualify for [teaching at upper secondary institutions](#) (the Danish Gymnasium, Higher Preparatory Examination, Higher Commercial Examination Programme and Higher Technical Examination Programme). AAU provides a model where students follow a primary subject for 3½ years and a secondary subject for 1½-2 years to enable them to teach these subjects.

AAU ON DEMAND

Through the initiative [AAU on Demand](#), several students at AAU are employed to teach off-campus at upper secondary institutions. All faculties on all AAU campuses are represented in this initiative where students have developed tailored lectures. The lectures include topics such as ethical technology assessment, sustainable design, smart energy systems, economic equality, and understanding gender identities.

CAMPUS SERVICE COLLABORATION

Campus Service continuously collaborates with students and staff on new projects and initiatives. An example is involving students in the development and implementation of a new waste management system at AAU. To further support such knowledge sharing and collaboration, AAU has established an [operational council on sustainability](#).

5 GENDER
EQUALITY140
PUBLICATIONS♀ 40%
FEMALE CO-AUTHORED PAPERS

Achieve gender equality and empower all women and girls.

FREIA

The multidisciplinary gender research centre [FREIA](#) at the Department of Politics and Society studies the interactions between power dynamics and gender in interplay with other differentiating and inequality-creating categories (such as sexuality, race, ethnicity, class, age, generation, etc.) in the nexus between local-national-transnational-global levels of analysis. FREIA continuously aims to apply a critical gender perspective to new questions across disciplines. More recent focus areas are gender and place/space; gender and nation; gender, social movements and transnational activism.

INTERLOC

The purpose of the [INTERLOC](#) project, at the Department of Sociology and Social Work, is to develop new knowledge about citizenship, everyday life and identities in relation to gender, class and ethnicity in a specific locality. The ambition is to further develop the understanding of the complex dynamics that characterise the interaction between gender, class and ethnicity in modern welfare societies.

THE DANISH GENDER EQUALITY POLICY REGIME

The purpose of [this project](#), at the Department of Sociology and Social Work, is to provide a thorough characterisation of the Danish regime of gender equality policy and identify key actors, dynamics and discourses that have been crucial for the development of key areas of gender equality policy. This includes equal pay, maternity leave and discrimination and anti-discrimination legislation, women's representation and mobilisation, and gender differences in attitudes and voter behaviour.

LEAVE FOR PARENTS IN THE NORDIC COUNTRIES

At the Department of Politics and Society, [this project](#) was initiated to examine the concept of leave in Denmark and other Nordic countries, where leave rights are established at several different levels: in legislation, in collective agreements, at the company level, and within the household. The project aims to map rights, rules and agreements and to address the construction and negotiation of leave on the different levels in relation to leave rights and ideals of parenthood and gender.

STUDY PROGRAMMES

[Global Gender Studies](#) (MSc specialisation, AAL): This study programme gives a specific focus to gendered perspectives on structures and processes in international law (including human rights); equality politics on the national, transnational and international levels; global democracy and governance; international institutions and actors.

[Applied Philosophy](#) (BA, MA, AAL/CPH): This study programme provides students with comprehensive philosophical insight while they develop general academic competencies at a high level. The programme enables students to apply philosophy to real problems. At both the Bachelor's and Master's level, students are introduced to matters of gender and equality based on different basic philosophical positions through courses on [Political Philosophy](#) (BA) and [Cultural Philosophy](#) (MA).

GIRLS' DAY IN SCIENCE

To encourage women to pursue degrees in STEM (Science, Technology, Engineering, Math), AAU hosts an annual [Girls' Day in Science](#) where female researchers present their work and host workshops. For this event, AAU invites young girls inside for a day with many exciting workshops on, for example, microplastics, worms in biomedical research, climate change challenges to infrastructure, energy requirements for new buildings, visualization of currents with laser and high speed cameras, computer codes that change the world and much more. In addition, the girls get a taste of the Aalborg model and insight into what it is like to be a student at AAU, and hopefully inspiration for a career in STEM.

WOMAN - KNOW YOUR CAREER

AAU has established a mentor programme for young researchers. The purpose is to retain more female researchers in academia. The university is also promoting female researchers as role models. In the summer 2019, for instance, the university hosted an [event to inspire young female researchers](#) to aim high in academia. At the event, five female researchers presented their journey and career. The five AAU female researchers presented their personal stories - the choices they had to make, the ups and downs, and the responsibilities of being a competent female researcher.

FOR WOMEN IN SCIENCE AWARD

Stine Linding Andersen, Dr.Med., of the Department of Clinical Medicine and Aalborg University Hospital was honoured for her research on metabolic diseases in pregnant women. The award was presented by HRH Princess Marie, patron of UNESCO, a sponsoring organisation of ['For Women In Science'](#) along with L'Oreal and the Royal Danish Academy of Sciences and Letters. The purpose of the award is to support gender equality at the top of Danish research by recognizing female talent and promoting and supporting talented female researchers.

GENDER EQUALITY AT AAU

[Gender balance in management](#): AAU governing bodies such as academic councils and study boards lag behind when it comes to gender equality. AAU's management would like to see an end to the gender imbalance and is encouraging all those interested to run in the AAU elections. It is important that everyone at AAU is represented in the governing bodies. This is where staff and students can influence the direction of the departments, faculties and AAU as a whole. The university can only reach its full potential when representation is more equal in terms of gender and diversity.

[Committee for equality and diversity](#): The Committee was appointed by the Executive Management and is responsible for the strategic and long-term development of equality and diversity efforts at AAU. A key area in the work of the committee is ensuring gender equality at AAU.

[Maternity and paternity leave](#): All parents are covered by the rules of the Equal Opportunities Act in Denmark. All parents who are salaried employees and self-employed are covered by the Act on Entitlement to Leave and Benefits in the Event of Childbirth. All state employees who are entitled to full pay during a sickness period are covered by the Parental Leave Agreement.



6 CLEAN WATER AND SANITATION



217
PUBLICATIONS

Ensure availability and sustainable management of water and sanitation for all.

DONUT

The water sector's challenges are the lack of information and knowledge about the water cycle. This information does not exist today and is increasingly requested for monitoring of both man-made and natural water systems. The [DONUT](#) (Distributed online monitoring of the urban water cycle) project is a collaboration between the Department of Computer Science and the Department of the Built Environment at AAU and private and public actors in the water sector. The project will develop and commercialise a unified solution that will enable cost-efficient, distributed monitoring of the hydrological and hydraulic states of the urban water cycle and provide data and knowledge about system correlations. Also, this project will help the water sector move into the big data era as it will develop and mature the basis of the forthcoming IoT and ICT infrastructures for blue, green and climate-adapted cities.

SMART WATER LAB

The one-of-a-kind [Smart Water Infrastructures Lab](#) at the Department of Electronic Systems is a modular test facility that can be configured to emulate Water Distribution Networks, Waste Water Collection or District Heating Systems. This laboratory aims to address problems in water cycle management with focus on how control technology can contribute to solutions. The laboratory provides opportunities for testing the robustness of various control solutions and innovative infrastructure solutions, and for verifying whether innovative ideas will work in practice.

COAST2COAST CLIMATE CHALLENGE

As the second lowest lying country in Europe, Denmark will undeniably be affected by the changing climate. In particular, the instability associated with excessive water and unpredictable weather patterns poses a significant threat. As water has no regard for municipal boundaries, the holistic solutions required to deal with this issue must be interdisciplinary and cross-organisational. One of the goals of the [Coast2Coast Climate Challenge](#) is thus to build municipal authorities' capacity and enable them to develop and implement climate adaptation plans in their respective areas. The project covers a large territorial area and involves 15 municipalities in the Central Denmark Region and 3 in the North Denmark Region. From AAU, Birgitte Hoffmann, Associate Professor in the Department of Planning, is a member of the scientific committee.



› Water laboratory at AAU

CLAIRE

Water is one of the biggest challenges in the world. Some places get too much rain, some too little. Drinking water may be contaminated or in critically short supply. However, water itself is neither good nor bad – the challenge lies in making certain that water is at the right place at the right time, and of a certain quality. In the new project [CLAIRE](#) (Controlling Water In An Urban Environment), researchers at the Department of Computer Science and the Department of the Built Environment at AAU will improve the possibilities for understanding and controlling water in urban areas.

STUDY PROGRAMMES

[Environmental Science](#) (BSc, AAL): This study programme is an interdisciplinary programme that combines chemistry, physics, biotechnology and biology. Students become acquainted with the methods, processes and technologies used in the environmental field, and learn how to handle a sudden situation such as pollution of drinking water or discharge of oxygen-consuming substances in streams.

[Water and environmental engineering](#) (MSc, AAL): In this Master's programme, students learn to construct systems for water supply and drainage systems. The students learn to plan how groundwater can be utilised and protected, and gain insight into the protection of streams, fjords, and seas.

SOLARSACK

Two Master's students at Architecture and Design initiated the development of the innovative [SolarSack](#) during their thesis. SolarSack is a special bag that is filled with four liters of water and then placed in the sun for four hours. Using UVA and UVB rays and the heat from the sun, the water is purified of harmful bacteria. The user can then drink the water and reuse the bag for water purification again and again. The method is approved by the World Health Organization WHO, which estimates that between 99.9% and 99.999% of the disease-causing bacteria in the water die. The students tested SolarSack in Kenya and Uganda with local users and organisations, and adapted it to their needs.

WASTE WATER TREATMENT AND MANAGEMENT

With campuses in three Danish cities, AAU is connected to the public sewage and waste water system in all cities, and thus follows the Waste Water Plan of [Aalborg municipality](#), [Copenhagen municipality](#), and [Esbjerg municipality](#), respectively. In addition, AAU regularly assesses its discharge permits, such as when changing building functions or establishing new facilities. This ensures that any discharges from AAU can be managed by public waste water treatment plants, and ensures good ecological quality for recipients.

ACCESS TO COLD DRINKING WATER

Denmark has some of the world's best drinking water as we protect our groundwater to ensure the cleanest possible drinking water. In all AAU buildings, [drinking water coolers](#) are installed to provide all staff and students with free, fresh, cold drinking water from local groundwater reserves.



7 AFFORDABLE AND
CLEAN ENERGY



 **1098**
PUBLICATIONS

Ensure access to
affordable, reliable,
sustainable and modern
energy for all.

DEPARTMENT OF ENERGY TECHNOLOGY

The [Department of Energy Technology](#) has made significant contributions to advancing a global green transition of power electronics. It conducts research and provides education within a broad field of Energy Technology, including Electrical, Thermal and Mechanical Energy.

In 2019, Professor Frede Blaabjerg received the prestigious international [Global Energy Prize](#) in acknowledgement of his outstanding contribution to the transition to green energy.

The department is a leader in energy research that includes the international project [Efficient and Reliable Integration of Renewables in the Grid](#), the project [MV-BASIC](#) which aims to reduce wind turbines' power consumption through medium voltage transistors, and the project [Power2X](#) where an electricity-to-methanol plant can provide green fuel for heavy transport and enable storage of green energy.

SUSTAINABLE ENERGY PLANNING

The [Sustainable Energy Planning Research Group](#) at the Department of Planning takes an interdisciplinary approach to sustainable energy planning. In the general area of energy planning, the focus is on technical and geographical aspects, such as energy system analysis, and economic and institutional aspects, such as feasibility studies and public regulation in the context of technological change. The group is a leader in the development of [4th Generation District Heating Systems](#) and in the development of [Renewable Energy Investment Strategies](#).

INTERHUB

The [InterHUB](#) project at the Department of the Built Environment will develop new knowledge on households in the changing energy system, on new buildings solutions and on how different utility services impact both households and the energy system. It will contribute to ongoing scientific and policy debates to ensure a sustainable, efficient, flexible, stable and affordable balancing of energy supply and demand.

FLEXIBLE ENERGY DENMARK

The Center for Embedded Software Systems (CISS) and the Center for Data-intensive Systems (Daisy) at the Department of Computer Science have joined forces with the other technical universities in Denmark on the digitalisation project [Flexible Energy Denmark](#). The project aims to create the next generation of intelligent, integrated energy systems based on Big Data and artificial intelligence to ensure flexible energy systems and efficient integration of wind and solar power to support the Danish target of independence from coal, oil and gas by 2050.

CO-CREATING GREEN TRANSITIONS

The [project](#) aims to contribute to increased production of renewable energy in the Øresund-Kattegat-Skagerrak region. The Department of Communication and Psychology participates as a research partner. The project will help promote the production of renewable energy through municipal involvement of actors who create change, and aims to develop and test methods and tools that engage actors in the green transition and create increased demand for renewable energy.

ENERGY EDUCATION

At AAU, several study programmes focus on clean energy, mainly offered by the Department of Energy Technology, focusing on [energy production](#), [energy transfer](#), [energy distribution and sustainable energy](#). Examples of AAU energy study programmes are:

[Sustainable energy engineering](#) (BE, AAL): The 3½-year engineering bachelor provides students with knowledge and skills in planning, production, distribution and consumption of electrical energy, thermal energy and mechatronics.

[Building Energy Design](#) (MSc, AAL): This programme provides knowledge about energy conditions and design in buildings and skills to combine and integrate solutions for construction, installation and energy technology to create cost-efficient solutions based on renewable energy technology.

[Sustainable Energy Planning and Management](#) (MSc, AAL): This programme focuses on research, development and promotion of rationality in planning and policy-making that optimises the benefits for global or local societies by making use of cost-effective energy technologies and smart policy.

ENERGYPLAN

The research group Sustainable Energy Planning at the Department of Planning hosts the freeware energy system analysis model [EnergyPLAN](#) which aims to aid the design of 100% renewable energy systems. EnergyPLAN simulates the operation of national energy systems on an hourly basis, including the electricity, heating, cooling, industry, and transport sectors. This model is used by researchers, consultancies, and policymakers worldwide.

TECHNICAL ACHIEVEMENT AWARD

Professor Petar Popovski of the Department of Electronic Systems received an [international research award](#) for his pioneering work on 5G wireless communication for intelligent electrical systems - 'smart grid communication', helping to ensure better use of the world's sustainable energy resources, and creating sustainable and intelligent power distribution.

ENERGY CLUSTER DENMARK

Denmark's [cluster organization for the entire energy sector](#) ensures that Danish companies develop new technological energy solutions that the world demands. The ambition is to create a Danish Silicon Valley for energy to help facilitate and raise funds for activities and projects. It seeks to involve partnerships between small and medium-sized companies, global companies and institutions. Jakob Stoustrup, Pro-dean for Education at TECH, is a board member.

ENERGY CONSUMPTION AT AAU

For some time AAU has focused on [reducing energy consumption in buildings](#), and reduced the energy consumption by 36% per user in 2006-2019. As of 2014-19, AAU has invested massively in sustainable solutions in buildings. Fully 100% of electricity consumption comes from sustainable sources (wind power). AAU still focuses on potential ways to reduce - for example the new green accountancy initiative (2021) to reduce CO2.



8 DECENT WORK AND ECONOMIC GROWTH



517
PUBLICATIONS

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

EXOSKELETONS IN INDUSTRY

[Exoskeletons](#) have served as an effective aid in rehabilitation for several years, but now the technology is also being used in industry which has discovered the benefits of exoskeletons such as fewer work-related injuries, fewer worn out workers and increased quality of life. Researchers in the Department of Materials and Production and the Department of Health Science and Technology will develop and test advanced computer models that can predict how much the strain of a particular lifting motion, which may be repeated hundreds of times during a workday, can be eased by a given exoskeleton.

ARCTISEN

The project [ARCTISEN](#) (Culturally sensitive tourism in the Arctic), anchored at the Department of Culture and Learning aims to develop a support system for start-ups and existing small and medium-sized enterprises offering innovative tourism products and services in the Arctic. The support system can be understood in many ways, but for us it means bringing together different actors and sharing knowledge and skills. Moreover, it is important to build new knowledge and create better understanding on encounters between locals and visitors.

GONST

In the [GONST](#) (Geography of Nordic Sustainability Transitions) project researchers from Lund University, AAU Business School, University of Tampere, NIFU, SINTEF, and the Technical University of Denmark ask "Where does the green economy grow?" There is no one-size-fits-all approach to greening the growth path of an economy as this depends on place-based policy and institutional settings, level of development, resource endowments and particular environmental pressure points. The aim of the project is to gain a better understanding of how transitions towards green growth unfold in different Nordic regions, and whether and how their respective development paths are conditioned by their pre-existing industrial, institutional and governance contexts.

TAKE-BACK

For several years, manufacturing companies have been developing products that only have a single life cycle. That is, once the product has reached the end of its service life, it is scrapped as an industrial waste product. However, in line with an increased political focus on environmental responsibility, and the fact that critical materials will become limited worldwide, there is a need to consider other directions. Researchers in the Department of Materials and Production are working with companies such as Grundfos and Danfoss to develop a [business case for take-back](#) that is both financially and environmentally sound.

CUBB

[CUBB](#) (Centre for Citizen Involving Employment Initiatives) aims to contribute to revamping public employment efforts, and is focused on involving citizens to a much greater degree than today. This effort includes increased attention on supporting citizens in taking ownership of and responsibility for mastering their own lives, thus improving their employment chances. This transition requires collaboration between research and practice as well as the mobilization of knowledge.

NORTH JUTLAND BUSINESS PANEL

The [North Jutland Business Panel](#) is a partnership between the local businesses in Northern Jutland and the AAU Business School. The panel was established to support business development in the region through projects, debates and events. The panel thus delivers business-critical insights, and thus aims to contribute to the success of private and public enterprises and build local alliances. The panel hosts an [annual business meeting](#) for the North Denmark Region business community, and in 2019, the theme of this meeting and [initial project](#) was sustainability in North Jutland companies. Researchers in the Department of Planning and the Department of Social Sciences hosted the project of mapping sustainability in more than 500 companies in the North Denmark Region.

STUDY PROGRAMMES

At AAU, several study programmes deal with matters of sustainable economic growth and decent employment, at the local, regional, national and international level.

[Economics and Business Administration](#) (BSc, AAL): This Bachelor's programme enables students to identify and analyse key economics and business related issues in an interdisciplinary perspective, as well as to design solutions relevant to the specific context.

[Economics](#) (BSc & MSc, AAL): This study programme is based on three pillars: macroeconomics, microeconomics, and tools and methods. Students are able to analyse complex issues at different societal levels and define and analyze socio-economic issues to develop new solutions.

[Tourism](#) (MA, AAL): During this Master's programme, students address SDG 8 specifically through the two course modules [Sustainable Tourism Transitions and Societal Challenges](#) and [Sustainable Development in Tourism, Transnational Mobilities and Communities](#). These course modules provide students with insights into contemporary debates and tools related to ethical, environmental, social, digital and economic issues in tourism.

UNION REPRESENTATIVES

The [union representatives](#) at AAU are essential to ensuring representation of staff in the workplace and in relation to management, and thus ensure collaboration between management and staff. The union representatives at AAU support staff in areas such as salary negotiations, illness, well-being, and competence development.

PROCUREMENT POLICY OF AAU

All [AAU's procurement activities](#) must comply with all legislation, executive orders, directives etc. in force. Furthermore, all purchases must be made in accordance with business principles and management decisions - while taking into account service, quality, security of supply, price, environmental considerations, working environment considerations, social responsibility and other ethical considerations.

[Labour clauses and minimum requirements in work contracts](#): During procurement of work at AAU Campus Service, minimum requirements are defined with regard to trainees at the supplier as well as specific requirements for the supplier to avoid social dumping and take social responsibility in the supply chain. These requirements are based on [ILO Convention 94](#) concerning Labour Clauses in Public Contracts.



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



 **68**
PUBLICATIONS

**Build resilient infrastructure,
promote inclusive and
sustainable industrialization
and foster innovation.**

REKON

Researchers at the Department of Materials and Production are leading the [REKON](#) project to develop a method and set of tools to help reduce time to market, equipment expenditure, development time and costs, as well as increase recycling and utilisation rate. The project will enable Danish companies to meet the variety of requirements through development of reconfigurable and platform-based manufacturing.

EXISTENTIAL ENTREPRENEURSHIP AND INNOVATION

In a major, externally funded, action research project in Vejle Municipality, researchers in the Department of Communication and Psychology investigate how to work with '[existential and wonder-driven innovation](#)' in public organizations. The project examines how such an existence and dialogue-philosophical approach can promote a more ethically responsible, sustainable and valuable approach to innovation. The project frames "existential and humanistic resilience" as something other than psychological, social, technological and ecological resilience.

EFFICIENT ANTENNAS

At the Department of Electronic Systems, researchers investigate the [quality of antennas in mobile phones](#) and the impacts on the phone's power consumption and battery. When a mobile phone with a bad antenna has a relatively difficult time getting in touch with the mobile mast, the phone simultaneously increases the transmission power, which both increases the Specific Absorption Rate (SAR) value and drains the battery.

SUSTAINABLE SYNERGIES

The [project](#), hosted by the Danish Centre for Environmental Assessment ([DCEA](#)) at the Department of Planning will improve the competitiveness of small and medium-sized enterprises by developing green business models to increase energy and resource efficiency through facilitated industrial symbiosis. The project covers postal code 9220 Aalborg East which contains large industrial and business areas.

SUSTAINABILITY LAB

The [Sustainability Lab](#) at the AAU Business School helps companies to assess and gain sustainability capability by offering research-based knowledge to stay competitive. Furthermore, companies may receive assistance in designing sustainability-driven business modelling strategies that take into account current and future market trends.

TRAFFIC DAYS

Since 1994, the Department of the Built Environment has hosted the annual conference [Traffic Days](#). The event brings together actors from research, industry and government to discuss and develop a safe, resilient and sustainable transport sector and infrastructure in Denmark. In 2019, the conference participants discussed bicycles, public transport, energy and climate aspects of traffic as well as intelligent traffic solutions.

AAU INNOVATION

[AAU Innovation and Research Support](#) promote knowledge partnerships and relationships with the surrounding environment. Research Support assists in areas such as project applications, funding opportunities and contracts. AAU Innovation promotes knowledge transfer, cooperation through activities and promotion of entrepreneurship.

[SEA - Supporting Entrepreneurship at Aalborg University](#): SEA supports and facilitates knowledge-based entrepreneurship for students and staff to further entrepreneurial competences and improve their potential as successful intra- and entrepreneurs. SEA works broadly in the context of PBL and entrepreneurship in AAU's programs and through guidance of startup teams in the AAU Incubator.

[AAU Science and Innovation Hub](#): The hub is to be completed in 2023 as a centre for interdisciplinary research, innovation, entrepreneurship, talent and business development. The plan is to establish five HUBs to test different models and scenarios.

AAU SPIN-OFFS

[STEP](#): STEP is a company founded by three tourism students during an innovation track of their studies. The first product by STEP is a biodegradable and home-compostable alternative to the legally required plastic bag for liquids in hand luggage on flights.

[REIntegrate](#): The spin-off Reintegrate has developed a new decentralized production technology that offers green e-methanol, identical to fossil methanol, from renewable energy sources and CO2 from bio-waste. E-methanol provides the transport sector and chemical industry a convenient transition to environmentally friendly fuels and chemicals.

[Advanced Traffic Systems \(ATS\)](#): AAU Researchers have developed a very promising technology based on machine learning and artificial intelligence that can contribute to improved traffic flow in signal-controlled intersections. The researchers founded the company ATS to implement this new technology that will benefit the climate, the economy and road users.

STUDY PROGRAMMES

Sustainable innovation and industrialization is included in several study programmes at AAU. Examples are:

[Sustainable Design \(MSc, CPH\)](#): This Master's programme combines sustainable product design with tools from innovation theory and user-oriented design.

[Leadership and Organizational Psychology \(Master of Learning Processes, AAL\)](#): In this study programme, students strengthen their theoretical ballast in learning, organizational development, evaluation and process management.

AAU AS A LIVING LAB

Campus Service provides facilities and buildings as [living labs](#) for students and staff to develop and test projects. An example is the improvement of lakes and canals on the AAU Campus, which will be the subject of student semester projects and research projects, such as in relation to biodiversity before and after the improvement process, and user behavior in the areas.



10 REDUCED
INEQUALITIES



 69
PUBLICATIONS

Reduce inequality within and among countries.

COHSMO

[COHSMO](#) is a major research project funded under the EU's H2020 programme, anchored at the Department of Law. The project focuses on inequality, urbanization and territorial cohesion, and development of the European Social Model of economic growth and democratic capacity. The overall aim of the project is to understand the relationship between socio-economic structures of inequality, urbanization and territorial cohesion, as well as how territorial cohesion at different European scales affects economic growth, spatial justice and democratic capacities.

DACS

The interdisciplinary [Danish Centre for Clinical Health Services Research](#) (DACs), was established in 2018 to find research-based solutions to healthcare challenges. Healthcare systems are under pressure due to increasing demand for services and limited resources. It is therefore imperative that healthcare systems are able to deliver high quality services in the most cost-effective way. One of the key challenges addressed by DACs concerns the unwarranted variation in the quality of healthcare, and its clinical and health-economic consequences. The focus of DACs is on implementation of evidence-based care, particularly in vulnerable patients, such as the elderly, patients with comorbidity or patients living in specific geographical areas.

FROM SHARING TO CARING

The terms "Sharing Economy" or "Collaborative Economy" have been commonly used in recent years to refer to a proliferation of initiatives, business models and forms of work. In this [research project](#), anchored at the Department of Planning, the focus is on rethinking the platform economy in a way that cares for the quality of work and life of people. The project aims to develop a deeper understanding of the collaborative economy phenomenon in all its aspects, by studying in-depth the sociotechnical systems and human practices involved, comparing and reflecting upon local, regional, national and international initiatives.

DARK DESIGN

The project [Dark Design](#) at the Department of Architecture, Design and Media Technology, investigates the concept of dark design, i.e. the social exclusion taking place via a combination of design and law in public urban spaces in Denmark. Dark Design (e.g. leaning benches or iron spikes) serves the purpose of restricting socially vulnerable and homeless people. The project results in a number of tools enabling dialogue between homeless people, NGOs, municipalities, property owners and authorities to support sustainable cities that embrace diversity.

AFRICALICS

[AfricaLics](#) – the African Network for Economics of Learning, Innovation, and Competence Building Systems – includes AAU as a key supporting organisation. AfricaLics brings together scholars, researchers and policy analysts who study development, innovation, learning and competence building in an African context, and supports African scholars, especially early career researchers, in producing research on innovation studies that is at the global frontier and is relevant to resolving developmental challenges of African communities.

GHET-IN

Are "ghettos" a problem for integration of migrants in Denmark? Migrants – especially vulnerable groups such as refugees – tend to cluster in areas. Politicians often fear that ethnic segregation negatively influences their integration in terms of labour market participation, educational outcomes, cultural adaptation and ultimately social cohesion if these areas develop into 'parallel societies'. There is a need for empirical knowledge on the consequences of ethnic segregation and evaluations of policies. Consequently, the [GHET-IN](#) project, anchored at the Department of Sociology and Social Work, attempts to fill a gap by critically investigating the positive and negative effects of living in a "ghetto".

STUDY PROGRAMMES

[Sociology](#) (BSc/MSc, AAL): Sociology is the science of society or "the social," and sociologists are particularly concerned with examining how society is connected and why it is changing. Sociology places the greatest emphasis on investigating, analysing and investigating social conditions and problems through the use of sociological theory and method.

[Social Work](#) (BSW, AAL): In this study programme, students gain knowledge about and build skills in how to work with human and social problems. This enables students to meet and work with people and groups in difficult and vulnerable situations, such as families in financial distress and conflicts between parents and teenagers.

HOUSING DAY 2019

[Housing Day 2019](#), hosted by the Department of the Built Environment, focused on the transformation of vulnerable housing areas and the importance of residential social mix. As part of the "ghetto plan" in Denmark, several residential areas have been required to reduce the number of public family homes. For many residential areas, this means demolition or conversion of homes, and completely new housing types becoming part of the residential area. The event provided insights into what happens when the social mix of residents is changing in such areas.

EQUALITY AT AAU

[Equal access for all](#): At AAU, ensuring equal access to buildings for all, regardless of disability, gender, ethnicity, etc., is a continuous process with regard to existing and new buildings.

[Committee for equality and diversity](#): The Committee for Equality and Diversity was appointed by the Executive Management at AAU, and is responsible for the strategic and long-term development of equality and diversity efforts at AAU. The Committee deals with issues related to gender, age, ethnicity, nationality, sexual orientation, religion, physical and mental impairments, etc.

[Zero tolerance policy on offensive and abusive behaviour](#): Positive study and working environments require a culture defined by respectful behaviour and communication. In accordance with Danish legislation and Aalborg University policies, all students and staff are expected to refrain from any form of bullying, harassment, differential treatment, discrimination, and threatened or actual violence. Aalborg University takes a zero tolerance approach to offensive and abusive behaviour.



11 SUSTAINABLE CITIES AND COMMUNITIES



 **783**
PUBLICATIONS

Make cities and human settlements inclusive, safe, resilient and sustainable.

COMMUNITY DRIVE

[Community Drive](#) is a technical and humanistic research and development project focusing on education, learning and the co-production of knowledge. The project seeks to create models for children and young people to participate in the resolution of future social challenges by becoming an active and contributing part of research and development efforts. The project is based on collaboration between AAU, Copenhagen Municipality and local schools.

LOW-ENERGY HOUSING

Housing accounts for a large proportion of energy consumption, which has led to stricter requirements for energy efficiency. The [project](#), at the Department of the Built Environment, contributes to the development of a low-energy detached house that meets both energy requirements and healthy indoor climate. To meet energy requirements, the house has its own solar panel system, and researchers now aim to develop solutions that maximize the interaction between the building and our energy supply, including the use of power from the home's own photovoltaic system.

DOMOS (OPERATING SYSTEM FOR SMART SERVICES IN BUILDINGS)

Future consumers must learn to perceive their houses as energy systems. This is one of the goals of a [new EU project](#) where the Department of Computer Science contributes to making existing buildings even more energy-smart. In conjunction with companies, utility companies and researchers from four other countries, the Danish partners are developing a platform that ensures that the various devices and sensors in houses can be controlled and work together in a smart and efficient way. It is both about reducing energy consumption and exploiting flexibility.

PERICLES

The Department of Planning leads the EU project [PERICLES](#) (Preserving and Sustainably Governing Cultural Heritage and Landscapes in European Coastal and Maritime Regions) which promotes sustainable, participatory governance of cultural heritage in European coastal and maritime regions through a unique interdisciplinary and geographically wide-ranging approach.

GREEN HUB DENMARK

[Green Hub Denmark](#) is a public-private partnership. The Hub contributes to solving climate challenges, attracting investments and creating more sustainable jobs by developing, testing and thereby creating businesses based on the sustainable solutions of the future. Jakob Stoustrup, Pro-dean for Education at the Technical Faculty of IT and Design, is a member of the Board of Directors.

SUSTAINABLE COMMUTING

In support of the local mobility plans of [Aalborg](#), [Copenhagen](#) and [Esbjerg](#), AAU aims to increase the use of bicycles and public transport through partnerships with local actors to establish proper bicycle paths and parking at all AAU campuses, as well as integrate public transport options that connect all campuses with the local cities.

STUDY PROGRAMMES

[Urban Planning and Management](#) (MSc, AAL): This study programme enables students to understand and cope with the challenges of urban development in the 21st century through a unique integration of engineering and social science. Planning and managing the development of contemporary cities is one of the major societal challenges worldwide.

[Sustainable Cities](#) (MSc, CPH): The aim of this Master's programme is to teach students about how to achieve a sustainable transition of cities through four key areas: resources, energy, water and climate change, and transport and mobility.

[Cities and Sustainability](#) (MSc, AAL): This Master's programme focuses on creating stronger urban environments by using a more holistic, multidisciplinary and participatory approach, placing citizens at the centre, and creating benefits and improving quality of life for the city's inhabitants and users.

BUILDING LIFE CYCLE ASSESSMENT

Life Cycle Assessment is an important part of assessing the environmental sustainability of buildings. Researchers at the Department of the Built Environment have developed the [LCA-build tool](#) that can calculate the environmental profiles of buildings based on the choice of different materials and design principles. The tool is free and supported by [examples](#) and [courses](#). The tool applies a lifecycle perspective and ensures calculation of a building's environmental impact from resource extraction to end-of-life.

BUILDING RENOVATION DAY 2019

In the construction industry, renovation deserves more attention and awareness, partly due to building renovations accounting for large parts of the industry, and also due to the potential sustainability benefits compared to new construction. The [2019 Building Renovation Day](#), hosted by the Department of the Built Environment, provided insights into research and practice on sustainable renovation of buildings.

UNIVERSAL DESIGN DAY 2019

The notion of universal design within the built environment focuses on the design of buildings to make them accessible and inclusive. During the [2019 Universal Design Day](#), hosted by the Department of the Built Environment, the spotlight was on the importance of universal design to support several SDGs, universal design as a business case and in practice.

SUSTAINABLE PLANNING AT AAU

[Urban planning](#): Campus Service at AAU is involved in various planning projects to ensure sustainable urban development, in collaboration with local actors, such as municipalities, agencies and housing associations. Such partnerships aim to develop campus areas that integrate research, educational, urban and industrial activities. The focus on [sustainable and holistic urban development](#) aims to ensure close integration in the local city and community.

[Renovation and construction](#): AAU strategically addresses sustainability in renovation and construction of new university buildings to ensure low energy consumption and sustainable construction, and draws inspiration from the renowned building sustainability certification [DGNB](#) when planning new buildings. An example is the [AAU Science and Innovation Hub](#) (2023).



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



288
PUBLICATIONS

Ensure sustainable consumption and production patterns.

DESIGNED TO LAST

The aim of the [project](#), anchored at the Department of Architecture, Design and Media Technology, is to give SMEs insight into what extending the lifetime of their products would mean for their company in terms of product design, market position as well as the company's ability to compete, business model etc. In order to provide them this insight, the SMEs design new product and business concepts that are 'designed to last'. The product and business concepts make it possible for the company to establish what it takes to make the extended lifetime of a product a viable business.

RECYCLING PLASTIC

Plastics could be recycled to a far greater degree if we develop methods to test the quality of recycled plastic. Researchers in the Department of Materials and Production work with industrial companies like Grundfos (water technology) and Logstor (district heating and cooling) to make one giant leap for [plastic recycling](#). To develop a model that can predict the properties of recycled plastics, the researchers study how plastic reacts to a particular chemical environment and how it is affected by temperature or impact. By comparing these experiments in a mathematical model, researchers will develop a method where short-term tests can determine long-term properties.

SUSTAINABLE GROWTH THROUGH ENERGY- AND RESOURCE-EFFICIENCY

The [project](#) supports energy and resource efficiency in small and medium sized companies in Northern Denmark. The project is a partnership between the local Network for Sustainable Business Development and the Department of Planning. The project focuses on strengthening the competitiveness of the companies involved through sustainable business models, industrial symbiosis and circular economy. More than 100 SMEs in Northern Denmark have been offered a screening to identify potential areas for energy and resource efficiency as a foundation for developing a resource plan.

WASTEMAN

The overall idea of the [project](#) is to facilitate the transition of the waste management sector from linear to circular economy by implementation of Integrated Sustainable Waste Management System (ISWMS). The project will thus decrease pollution from the waste management sector and at the same time ensure effective recycling of municipal waste resources. The Department of Planning participates in the project in conjunction with the waste management company of Bornholm, Bofa. Living Labs are established to test and develop new ideas and experiments that take into account the social and technological conditions of local waste management.

PREPARE NETWORK

Researchers in the Department of Planning are members of the [PREPARE Network](#) for experts in sustainable consumption and production, and Professor Arne Remmen of the department is the national Danish representative in the network. The network brings together actors from the private and public sectors for collaboration and innovation in support of sustainable consumption and production.

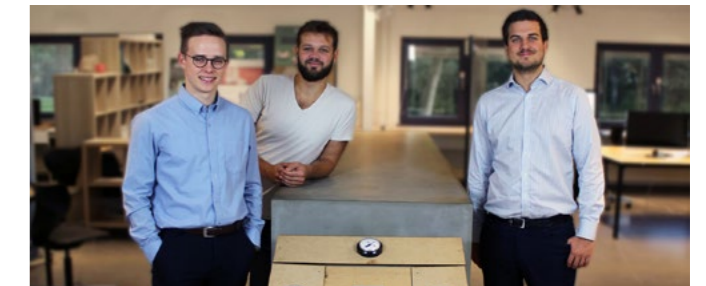
ENVIRONMENTAL MANAGEMENT AND SUSTAINABILITY SCIENCE (MSC, AAL)

This [study programme](#) meets the new sustainability challenges by integrating input from the social and human sciences into the study of planning and engineering. The focus is on how companies, governments and other organizations can support sustainable development in an economically efficient and socially acceptable manner. The study programme defines and solves environmentally related problems in the business world as well as in public sector organisations and the wider society.

WASTE WIZARD

Three students in the Master's programme Interaction Design at the Department of Computer Science in a student research project focusing on sustainability have developed an [intelligent waste bin](#) that uses advanced image recognition and machine learning to sort waste.

A camera registers the waste and compares it with an extensive image database of different types of products to sort it via artificial intelligence into the categories "waste" or "recycling". Through a gaming element, people must indicate on a button how they think it should be sorted. The project focuses on the challenges consumers experience with waste sorting and how technology can help solve these challenges.



› Developers of Waste Wizard

WASTE MANAGEMENT AT AAU

AAU has implemented a new [waste sorting system](#) to increase sorting of recyclable fractions like plastic, glass, bio-waste, metal, paper etc., all in accordance with the national [Climate Plan for a Green Waste Sector and Circular Economy](#). Through this waste sorting system, AAU will be able to reduce CO2 emissions, increase recycling and generally ensure sustainable campus service.

SUSTAINABLE PRACTICES

[Several initiatives](#) are in place to support responsible consumption and production at AAU. Firstly, cleaning services at AAU are based on activity levels and actual needs, and are focused on reducing the use of chemicals and water in cleaning. Secondly, all paper and soap dispensers are replaced with more efficient models. The replaced dispensers are disassembled to ensure material recycling. Thirdly, single-use plastic is phased out in AAU canteens and replaced with more sustainable options. Fourthly, non-toxic and winter weed control is implemented to reduce negative impacts. Lastly, sustainable consumption is also integrated into procurement at AAU, such as in relation to furniture. Used furniture is re-sold or donated.



13 CLIMATE ACTION



 **215**
PUBLICATIONS

Take urgent action to combat climate change and its impacts.

REDOCO2

The project Reducing and Documenting CO2 emissions from Peatlands ([ReDoCO2](#)) is a collaboration between researchers from AAU, Aarhus University and three companies, funded by Innovation Fund Denmark. It develops an overall methodology to map peatlands in detail and enable accurate estimates of CO2 emissions and potential C stock through the combination of state-of-the-art hardware, software, modelling techniques and IT technologies. This methodology will provide decision-makers with detailed information and cost-effective tools to appropriately select which peatland areas to take out of agricultural production and restore.

BATTERIES FROM FUNGI

The current production of batteries based on metals such as vanadium has a large impact on the climate, and the environmentally harmful substances are difficult to recycle. This is a problem as the green communities of the future will need battery capacity, for example, to store power on windy days for use on calm days. A research project at the Department of Chemistry and Bioscience aims to enable storing wind turbine power in [sustainable batteries made from fungi](#). In the future, when solar cells and wind turbines produce more electricity than we can use, the energy can be stored in environmentally friendly and inexpensive batteries made from fungi.

FISH FOOTPRINT

This [project](#) initiated a systematic Danish-based effort for assessing the climate impact of Danish fisheries to provide an opportunity to better document and reduce it in the long run. The project involves industry and relevant stakeholders to identify, discuss and test the relevant questions, methodological approaches, and data sources to perform climate footprint assessment of Danish fisheries. The project is a partnership of researchers from the Department of Planning and the Department of Chemistry and Bioscience.

AMBITIOUS DANISH CLIMATE PLAN

In conjunction with researchers from AAU, the Danish Society of Engineers has prepared the first overall [climate plan](#) for Denmark. This plan is focused on how the transportation and energy sectors can achieve the Danish Government's goal of reducing greenhouse gas emissions by 70 percent by 2030. It goes beyond the Danish government's current goal of climate neutrality in 2050 as the plan aims for climate neutrality by 2045.

NATIONAL NETWORK FOR CLIMATE ADAPTATION

Denmark and the rest of the world are facing massive investments in climate adaptation in the coming decades. This will require gathering and strengthening competencies and knowledge in the field. Therefore, a large number of public and private organisations have joined forces in the [National Network for Climate Adaptation](#). The Network aims to promote a holistic climate adaptation in Denmark. Birgitte Hoffmann, Associate Professor in the Department of Planning, is a member of the Board and a knowledge partner.

CLIMATE-FRIENDLY AIRCRAFT FUEL

Aviation accounts for approximately three percent of Europe's total greenhouse gas emissions. But emissions are increasing, and flying to and from one of the world's great destinations even once can represent up to half of the annual footprint of an average European. The Department of Energy Technology, in conjunction with companies such as Steeper Energy ApS, is building a [new plant](#) to convert sewage sludge, wood residue and organic household waste into crude oil.

DANISH COUNCIL ON CLIMATE CHANGE

The [Danish Council on Climate Change](#) is an independent body of experts established to advise Denmark on how to undertake the transition to a low-carbon economy by 2050 in the most cost-effective and efficient manner. The Council provides solid, professional recommendations on how to achieve the EU goal of reducing CO2 emissions by 80-95 percent by 2050. Professor Per Heiselberg of the Department of the Built Environment is a council member.

SURVEYING, PLANNING AND LAND MANAGEMENT (BSC/MSC, AAL/CPH)

The [Bachelor's](#) and [Master's](#) programmes Surveying, Planning and Land Management contain a strong interdisciplinary sustainability profile that includes administration of natural resources; physical planning of cities, open land as well as the sea; property rights; geographical information technology; methods for surveying and mapping; and geographical data infrastructures to ensure responsible land management and climate actions.

BIOENGINEERING (MSC, ESBJERG)

The need for societies to be balanced in terms of use of resources, production of waste and impact on the environment is more urgent than ever. With a [Master's in Bioengineering](#), students become a highly desired technical expert in macro- and molecular engineering of biological processes. This programme enables students to support the transition of society towards sustainable production and in the change from fossil to biomass raw materials, thus working to reduce negative impacts to the climate.

RENEWABLE ENERGY AT AAU

At the beginning of 2020, AAU invested in [green power](#) from Danish wind turbines to reduce AAU's overall CO2 emissions. It aligns with the AAU sustainability policy that aims to integrate environmental, economic and social sustainability at all levels of strategic and operational activities at the university.

REDUCING CO2 EMISSIONS FROM AAU CANTEENS

At the canteens on AAU campuses, [different activities](#) have been initiated to reduce the climate impact of food consumption. These efforts include an increase in plant-based food options, reduction of meat consumption, prioritisation of local produce, reducing single-use plastic, and reducing food waste.



14 LIFE
BELOW WATER



 **516**
PUBLICATIONS

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

MARINE ANALYTICS

Researchers in the Department of Architecture, Design, and Media Technology will develop artificial intelligence to analyse underwater conditions. The research is being done in conjunction with the American company Kitware and the Danish company Ambolt with funding from the Independent Research Fund Denmark. Using computer vision, the research project [Marine Analytics](#) will develop artificial intelligence algorithms for a new system that automatically analyses the underwater conditions in waters with varying visibility as in Europe. The overall goal of the project is for artificial intelligence to help gather more and better maritime data on the world's underwater conditions so that environmental problems can be understood and remedied in the future.



› [Marine Analytics](#) researchers PhD fellow Malte Pedersen and professor Thomas B. Moeslund

MARINEPLASTIC

A new Danish research centre [MarinePlastic](#) will develop solutions to the problem of plastic pollution in the ocean. Based at the Department of the Built Environment and funded by Velux Fonden, the centre joins Danish universities and disciplines to tackle one of the biggest environmental problems together. Plastic in the oceans is a growing problem for both nature and human health, and MarinePlastic will work on the problem of plastic pollution from multiple angles. Research activities include gathering knowledge about the types, causes, extent, spread, degradation and environmental impact of plastic pollution.

OCEANS PAST PLATFORM

The [Oceans Past Platform Action](#), anchored at the Department of Politics and Society, aims to measure and understand the significance and value to European societies of living marine resource extraction and production to help shape the future of coasts and oceans. The integrative platform will lower the barriers between human, social and natural sciences; multiply the learning capacity of research environments; and enable knowledge transfer and co-production among researchers and other sectors of society specifically by integrating historical findings on the scale and intensity of resource use into management and policy frameworks.

CENTRE FOR BLUE GOVERNANCE

The [Centre for Blue Governance](#) at the Department of Planning is a multidisciplinary social science research group focused on the interactions between people and the sea. CBG deals with the sustainable management and governing of maritime activities at sea (fisheries, shipping, offshore wind, tourism, etc.) and activities in coastal areas (fisheries communities, tourism, etc.).

ENVIRONMENTAL SCIENCE (MSC, AAL)

The Master's programme in [Environmental Science](#) offers the opportunity to participate in the development of new processes and technologies that can ensure sustainable use and management of natural resources, reduced climate impact and better environmental quality. In Environmental Science, students can work with energy from biomass and waste, biological air cleaning in industry and animal farming, methods for rapid detection of bacteria in drinking water, biological methods for assessment of water quality in rivers and lakes, and mitigation of greenhouse gases and recycling of nutrients.

PARTNERSHIP FOR SUSTAINABLE FISHERIES

The [partnership for Sustainable Fisheries](#) is an initiative that brings together key fisheries actors with the purpose of increasing dialogue, knowledge sharing and initiatives related to the sustainability of fisheries and the sea. An important theme in the partnership is to create mutual recognition of the different aspects of sustainability in the fishing industry and to develop parallel concepts that clarify the various parameters: from sustainable stocks to climate impact, and from seabed and biodiversity to social considerations and job creation in coastal areas. Researchers at the Centre for Blue Governance are involved in the partnership.

NATURSKÅNSOM

[NaturSkånsom](#) (Nature-Friendly) is a new state-controlled ecolabel for fish caught with low impact gear. Fishermen who protect the marine environment can now put the state-controlled ecolabel NaturSkånsom on their fish. This will inform consumers about sustainable and responsible fishing, support coastal fishing and protect nature in the sea. The fishermen who are part of the scheme may only fish with gentle gear such as longlines, nets and float trawls that protect the vulnerable and valuable environment on the seabed, which is essential for a healthy ecosystem in the sea. From AAU, researchers at the Centre for Blue Governance participated in development of this ecolabel.

IMPROVING AAU CAMPUS LAKES AND CANALS

On the AAU campus in Aalborg East, green areas and water surround the buildings, and multiple canals and lakes are connected throughout the campus area. A [new project](#) will improve the ecological quality of the water, improve recreational areas surrounding the water and ensure proper management of heavy downpours in the future. AAU is collaborating with the local community and authorities in the project planning, implementation and operations. The project entails an investment of EUR 3 million for AAU.

SUSTAINABLE URBAN DRAINAGE

On the AAU Aalborg East campus, [sustainable urban drainage projects](#) have been established to manage potential storm surge overflows and other water-related natural events. This includes the use of parking areas as dry detention basins.



15 LIFE ON LAND



330
PUBLICATIONS

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

STATISTICS DECIPHER THE RAINFOREST'S BIODIVERSITY

By using [statistical models and advanced mathematics](#), researchers in the Department of Mathematical Sciences support biology researchers in understanding why the trees of the rainforest grow where they do. By studying the spatial distribution of trees over time, mathematicians have come up with new clues for understanding how life in the rainforest develops.

MUSKOX PATHWAYS

[Muskox Pathways](#) explores the social and economic relations between humans and muskoxen in Greenland in a long-term perspective. The project brings together anthropologists and archaeologists from the universities in Aarhus, Aalborg (Department of Culture and Learning), and Copenhagen to explore the current, historical, and pre-historic pathways along which muskoxen migrate, transform and emerge in constellations with humans where each affect the other in profound ways.

LIVING ON THE EDGE

This [project](#), anchored at the Department of Politics and Society, seeks to explore the risks, resources, resilience and relocations of small settlements on Agger Tange in Western Jutland in the period c. 1750-1900. Our abilities as societies to cope with, through mitigation and adaptation, the human coastlines we created in the Anthropocene, are crucial for human survival. Juxtaposing these current challenges with historical narratives adds much needed depth and a perspective for the future we will live in.

DREAMS

[DREAMS](#) (Digitally supported Environmental Assessment for Sustainable Development Goals) is an international project with 15 partners comprising major infrastructure developers, major consultancy companies, four universities, IT companies, and the Ministry of Environment. The project is hosted by the Danish Center for Environmental Assessment ([DCEA](#)) at the Department of Planning. The project aims to promote progress on the Sustainable Development Goals by digitally transforming the way society accesses and communicates information about the environmental impacts of projects and plans in order to enable the best decisions towards the green transition in a transparent and inclusive democratic process.

BIOLOGY (BSC/MSC, AAL)

In the [Biology programme](#), students experiment, try out new methods in both nature and the laboratory and learn about all aspects of biology - from the smallest building blocks of life to large complex ecosystems, and the living nature at all levels. Students learn about bacteria, plant and animal physiology, molecular biology, genetics and evolution as well as ecosystems on land and in water. The study programme includes fieldwork such as collection and recordings in streams, seas, forests and moors, as well as laboratory work with controlled trials and analysis of nutrients, re-expression and greenhouse gases.

GROW WILD (VILD MED VILJE)

With the aim of increasing biodiversity through restoration, protection and establishment of wilderness and natural resources within city areas, AAU has joined the concept "Vild med Vilje" ([Grow Wild](#)). Campus Service at AAU is changing how green areas are managed by reducing resources spent on cutting and trimming grass and other plants. This in turn results in increased resources spent on providing improved outdoor study areas in the green areas of AAU. Rewilding green areas at AAU has resulted in several positive benefits in addition to increased biodiversity: reduced fuel consumption, reduction of occupational injuries, and reduced noise and pollution. Since 2019, AAU has been surrounded by 75.000 m² of wild nature, and new projects to further increase biodiversity are still being implemented.

In addition, new greenhouses with study areas have been established at campus to provide students with study areas in the new wilder nature of AAU campus.



› Greenhouse at AAU campus

GEOGRAPHY (BSC/MSC, AAL)

Geography is about the connection between people and the environment across nature, society, culture and the environment - both in an international and a local context. Through this [study programme](#), students gain knowledge about landscape formation, nature management, geology and general environment and sustainability.

COLLABORATION BETWEEN AAU AND AALBORG ZOO

AAU students in the Biology programme get a unique opportunity to improve their knowledge and skills with regard to the world of animals with a [new collaboration agreement](#) between the university and Aalborg Zoo. The physical presence in Aalborg Zoo adds a new dimension to the Biology study programme and increases the students' opportunities to include high-level research in their study projects in conjunction with talented researchers and the staff at Aalborg Zoo. In addition, biology students get a fantastic opportunity to train in disseminating their research to the general population as there will be an opportunity to communicate their results to Aalborg Zoo's guests.



16 PEACE, JUSTICE
AND STRONG
INSTITUTIONS



414
PUBLICATIONS

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

THE BORDERS OF DEMOCRACY

This [project](#), anchored at the Department of Politics and Society analyses the legitimacy of four different borders of inclusion and exclusion of democratic interests. The project asks how democracies might defend the exclusion of groups such as children, future citizens, and immigrants that are affected by democratic policies but excluded from democratic procedures; and how democracies might defend norms and policies that undermine the preconditions for popular sovereignty of others such as future citizens and peoples in other countries.

TOPNORDIC

The [TOPNORDIC](#) project at the Department of Politics and Society analyses the governance system of Nordic local government with a focus on the Nordic municipal CEO. Through the focus on the municipal CEO, the project aims to uncover basic features of the career system, the governance networks and the leadership styles characterizing Nordic local government. Municipal CEOs are seen as both civil servants and leaders operating within a democratic governance system characterized by different often competing paradigms leading to paradoxes, dilemmas or at least tensions for the leadership of municipal CEOs who operate in the grey area between politics and administration.

CRIMINALIZED VICTIMS (CRIVIC)

The project [CRIVIC](#), anchored at the Department of Sociology and Social Work examines trafficked women's encounters with Danish authorities, and the significance of a status as a "victim of trafficking" for victims' opportunities and everyday life in Denmark. Based on the voices of potentially trafficked women, the project seeks an understanding of how they, as irregular sex workers with a status as potentially trafficked, experience and manage to live a life in Denmark outside the system. Furthermore, the project seeks an understanding of how the Danish system is organised in relation to combatting human trafficking in Denmark.

OPEN DATA FOR SUSTAINABILITY ASSESSMENT

Sustainability is increasingly becoming a key aspect of political decision making, commercial positioning, and recently also a key leverage in election campaigning in national and supranational democratic processes. This is expected to increase with the global socioeconomic impacts of climate change. Transparent knowledge of "good sustainability performance" is therefore becoming increasingly important for good governance and democratic political processes. Open access to transparent quality data on sustainability is therefore one key parameter for a well-functioning democracy and thus contributes to SDG 16.

The [project](#) is based on an open development platform with international participation and cooperation from individuals in research and industry including, Denmark, Germany, France, Italy, Spain, USA, Norway, and the Netherlands. At AAU, the project is based on a collaboration between the Department of Planning and the Department of Computer Science.

STUDY PROGRAMMES

[Law](#) (LLB, LLM, AAL): The teaching of law places great emphasis on students learning how the legal system is structured and how to find and apply the rules of a specific area to ensure justice.

[Criminology](#) (MSc, AAL): This Master's programme focuses on the study of criminality, breaches of norms, and social deviance, as well as the consequences of these, and the societal institutions to prevent and combat such criminality. It is also the only Master's programme in Criminology in Denmark.

[Public Administration](#) (BSc, AAL): This Bachelor's programme aims to provide students with broad social science competencies in sociological, socio-economic and political science enabling them to work in the public sector system, helping to ensure peace, justice and strong institutions.

FREE LEGAL AID

An [association of law students](#) from AAU offer free legal aid to individuals across Denmark with regard to any legal issues concerning e.g. family, inheritance, insurance, employment, property, health, debt and integration. The law students support individuals with guidance and recommendations on how to manage their case.

THE DANISH INSTITUTE FOR HUMAN RIGHTS

AAU's Jesper Lindholm, Associate Professor, is vice chair of the [Danish Institute for Human Rights](#). The board consists of 14 members and is appointed by the universities, the Council for Human Rights, the Greenland Council for Human Rights and the staff of the department. The Board's work is based on a notion of openness that implies the greatest possible openness unless the opposite is necessary. The Board works to promote and protect human rights, equality and justice in Denmark and internationally.

ELECTED REPRESENTATION

AAU holds [annual elections](#) to elect student and staff representatives to the university's highest governing bodies: The University Board of Directors, Academic Councils, Department Councils and the Study Boards.

STUDENT ASSOCIATIONS

AAU recognises [student associations](#) by the university working closely with them and providing the student associations with financial and practical support. Once a year, the Rector's Office meets with all student associations to discuss university policies and strategies to ensure inclusion of students' comments and ideas.

AAU CODE OF CONDUCT

As AAU is a self-governing institution under public sector administration, the same fundamental values as the rest of the public sector apply; these values include openness, democracy, the rule of law, objectivity, integrity and impartiality as well as the requirement of lawful administration, and is written in the [AAU Code of Conduct](#).



Strengthen the means of implementation and revitalize the global partnership for sustainable development.

NETWORK FOR SUSTAINABLE BUSINESS DEVELOPMENT

“[Netværk for Bæredygtig Erhvervsudvikling NordDanmark](#)” (NBE) is a triple helix network for sustainable business development in Northern Denmark. The network aims to strengthen the competitive advantage of the companies involved through targeted efforts on sustainability. The network is a private-public partnership of municipalities, local business agencies, AAU and more than 130 private companies. Several entities at AAU are involved in the network, including the research group for Sustainability, Innovation and Policy at the Department of Planning, is a research partner on the partnership project [Circular Innovation in Partnerships](#). The project is focused on establishing innovation partnerships for circular economy and sustainability in six areas: construction, biomass, tourism, textiles, plastic and production.

ACCESS2INNOVATION

DanChurchAid, North Denmark EU Office, South Denmark European Office, Confederation of Danish Industry (DI) and the Department of Planning and the Department of Energy Technology established the [Access2Innovation](#) network in 2007. The network supports partnership creation for innovative, sustainable and commercial solutions for emerging markets in Africa. This includes [innovative shelter solutions for refugees](#), [solar powered water pumps](#) and [sensor-based irrigation systems](#).

MATCH

Voluntary social organisations that work to improve the well-being and conditions of vulnerable groups in Danish society are facing challenges in terms of recruitment and retention of volunteers. The research project [MATCH](#), anchored at the Department of Sociology and Social Work, focuses on mapping these challenges to improve the possibilities of civil society organisations for supporting vulnerable groups in Denmark, thus reducing inequalities, gender gaps and providing the necessary support through volunteers.

OUR GOALS

Researchers from AAU will help to qualify and validate how we can measure Denmark's progress towards the UN SDGs. The project [Our Goals](#) specifically takes the SDGs for global sustainable development as its point of departure, and covers everything from equality and climate to goals of quality education and responsible consumption and production. The project aims to develop Danish indicators for the SDGs that Denmark has committed to complying with. A total of 15 researchers from AAU contribute to the project.

SUSTAINABLE CAMPUS FORUM

In 2019, a [Sustainable Campus Forum](#) was established at AAU with the purpose of inspiring and qualifying sustainability efforts in campus operations. The forum is composed of representatives of students and staff from the different campuses at AAU along with representatives of Campus Service, the campus managers of AAU Esbjerg and AAU Copenhagen, and the campus director of AAU Aalborg. The vision is for the forum to achieve a common understanding of sustainability in relation to AAU operations.

COLLABORATION WITH INDUSTRY, PUBLIC SECTOR AND NGOS

Each semester, several thousand AAU students [collaborate with companies](#) on their semester projects. Students are given real-life cases from companies, and provide potential solutions to the given problem from companies. In addition to semester projects, students also do internships for three to six months in companies in Denmark and abroad.

THE DANISH ACADEMY OF TECHNICAL SCIENCES (ATV)

With the ambition of making Denmark one of the five leading Science and Engineering regions in the world, the independent think tank [ATV](#) utilises the combined knowledge and skills of more than 800 Fellows and partner members to improve the framework for science and technology research and application in Denmark. The Academy's work is organised in seven areas, including Technology for Sustainability. From AAU, Professor Mogens Ryholt Poulsen, Dean of the Faculty of Engineering and Science, is member of the presidium, and several researchers are members of the different sage councils within the Academy.

AALBORG SUSTAINABILITY FESTIVAL

AAU participates in [Aalborg Sustainability Festival](#), where both the city's and the region's many sustainability initiatives are on display. The festival is a clear indication of the growing interest in and awareness of sustainable thinking whether we are talking about private homes, public institutions, or private companies. The purpose of Aalborg Sustainability Festival is to raise awareness of the many local initiatives that exist in the field of sustainability and to inspire citizens for more sustainable behaviour.

INTERNATIONAL NETWORKS AND PARTNERSHIPS OF AAU

As a [network university](#), AAU is a member of a large number of international networks and international collaborations that extend around the world. This includes the [European Consortium of Innovative Universities](#), the OECD programme [Institutional Management in Higher Education](#) (IMHE), and [Cesaer](#).

DIGITALLEAD

[DigitalLead](#) is a national digitalisation hub, which supports innovation, growth and the SDGs through digitalisation in the Danish business community. The hub provides the foundation for collaboration between companies and build a bridge between research and business. From AAU, Henrik Pedersen, Dean of the Technical Faculty of IT and Design, is member of the board of directors.

NETWORK OF DANISH UNIVERSITIES

Campus Services at AAU participates in a network across all the Danish universities to exchange knowledge, competences and creativity with regard to sustainable operations of universities and campuses. This entails areas such as sustainability strategies, waste management, circular economy, transport, carbon emission accounting, etc.

About this report

This report summarises a selected range of activities that AAU is engaged in to meet the UN Sustainable Development Goals (SDG). Thus, this SDG report constitutes only a subset of the many initiatives AAU has embarked on in relation to the SDGs. Additional information can be found on the [AAU Sustainability website](#).

The activities presented in this report pertain to research, teaching/education, engagement, and operations. The activities included were identified through a comprehensive consultation with key stakeholders at the Faculty of Medicine, the Faculty of Humanities, the Faculty of Social Sciences, the Faculty of Engineering and Science, the Technical Faculty of IT and Design, AAU Innovation, and Campus Service.

Publication data used in this report for each SDG is based on a hybrid approach: in addition to the publicly available [keyword sets developed by Elsevier](#), AAU has added its own set of Danish keywords within the SDGs, matching the keyword sets by Elsevier. This ensures inclusion of relevant publications within the SDGs that are published in Danish and thus enables a local perspective. All publication data is drawn from the AAU research database [PURE](#), using Lucene query. The search was limited to publication titles only. Only publications with the visibility setting "Public" are included, and the search was limited to 2010-2020.

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