

# SUSTAINABLE DEVELOPMENT

*Sustainable development is important to us; we always consider the long-term social, economic and ecological consequences and allow them to guide our operations.*

The University of Gothenburg has a long tradition of research and education within sustainability and has been conducting a number of research projects relating to war, migration, democracy, freedom of expression and other global societal challenges for some time. Through the principles of global engagement and strong social responsibility contained in Vision 2020, it was proposed that the University should work towards sustainable development, which is concretised in the Environmental Policy and the University's Action Plan for Environment and Sustainable Development.

Both the University's core and support activities have been environmentally certified in accordance with the international environmental standard ISO14001 and registered according to the EU *Eco-Management and Audit Scheme* (EMAS) Regulation since 2004. The University is seeking to reduce its negative environmental impact from, for example, the use of chemicals, use of energy and travel, and also to improve the preconditions for education and research within sustainable development. This work is based on the *Action plan for Environment and Sustainable Development 2011-2015*. A follow-up and the results of all objectives and indicators for 2015 can be found at the end of this section.

## **Global challenges and sustainable solutions**

The UN adopted 17 Sustainable Development Goals (SDG) in 2015. These goals are to govern the development of policies, agendas and solutions over the forthcoming 15-year period. The goals are universal and relevant to all countries and question how we live, how we structure our finances and how we produce and consume. They also require new solutions and alliances to generate change. The Centre for Environment and Sustainability (GMV) was tasked in 2015 with hosting the Secretariat for *Sustainable Development Solutions Network Northern Europe* (SDSN NE). The network brings together knowledge, experience and capacity within academia, trade, industry and civil society stakeholders and works to promote development in Northern Europe,

and similarly the region's initiatives for sustainable development throughout the world.

SDSN NE will focus on new solutions for its network activities, but will also work on existing processes within politics and with trade and industry.

## **Great variety of excellent research**

The University has a variety of strong disciplines that together can address global societal challenges and contribute to sustainability. In addition to existing research within sustainable development, the University of Gothenburg is investing SEK 300 million in research over the next few years on the theme of global societal challenges. This initiative is known as the *University of Gothenburg Centres for Global Societal Challenges* (UGOT Challenges). Six research centres have been established, based on the need for strong interdisciplinary research to resolve contemporary societal challenges.

The University is also characterised by strong social responsibility within education, and seeks to educate citizens with respect for fundamental values such as human rights and freedom. This year's *Global Week* focused on, for instance, global migration and afforded an opportunity for in-depth knowledge and respectful discussions. Another initiative is the open series of seminars run by the School of Global Studies on the theme of global challenges, which provides students with an understanding, and thus the tools, to contribute to democratic societal development.

## **Research in interaction with others**

### **World Environmental Education Congress**

Eight hundred delegates from over 70 countries gathered in Gothenburg for several days in June on the theme of *Planet and People – how can they develop together?*, the eighth conference within education for environment and sustainable development under the auspices of the *World Environmental Education Conference* (WEEC). The University of Gothenburg and Chalmers hosted the



Global Week 2015 took place on 16 to 18 November. Those who were interested could have in-depth discussions here about the greatest refugee disaster since the Second World War. During this time, the compelling need – or desire – of humans to move within and between countries was discussed, and questions asked about how journalism and documentary films can restore dignity to forgotten migrants.

Congress together with WEEC's permanent secretariat through the Centre for Environment and Sustainability. The conference included 120 parallel sessions and six plenary sessions, while a large number of ancillary activities involved students and teachers from throughout the world. The research leaders for the conference were Ingrid Pramling Samuelsson and Arjen Wals, both professors at the Faculty of Education.

Several organisations, both local and international, participated in the Congress; the City of Gothenburg, the Keep Sweden Tidy Foundation and the International Association of Universities were a few of these. A decision was made during the planning of the event that sustainability and learning should permeate the entire Congress and all associated activities to inspire participants both in terms of new ideas and continued actions. For example, Sweden's first 'tap labelling' was launched, which means that only tap water was served.

#### Interdisciplinary studies for the sea

The Centre for Sea and Society at the University of Gothenburg has been established for a six-year period up until 1 July 2021. The mandate of the Centre is to initiate, stimulate and develop cross-disciplinary

research and education within the maritime area and is to constitute a hub for collaboration with external related activities, including within the maritime cluster. Lena Gipperth, Professor of Environmental Law, will lead the new Centre supported by a steering group, represented by all of the faculties. The Department for Marine Sciences at the Faculty of Natural Sciences will be the Centre's host department.

#### Photography as a tool

The Valand Academy organised an international two-day symposium at the end of April entitled *Environmental Photography and Humanities – Contributions to Research and Awareness*, the purpose of which was to bring together multidisciplinary issues, practitioners and studies within humanities, social sciences, art and natural sciences. The symposium dealt with perceptions about the landscape, how nature has been valued and used and how human activities function as part of the earth's ecosystem, or interfere with this, and also future implications of different approaches. Eleven researchers from New Zealand, Great Britain, Sweden and the United States showed how photography can be an important tool for understanding the rapid

changes in our natural environment and how these affect humans and society. The symposium was introduced by Anders Wijkman (Chair of the Club of Rome), and speakers included Professor Daniel Schrag (Head of the Harvard Center for the Environment) and one of President Barack Obama's technology and science advisors.

### Network for humanistic environmental research

The Board of the Faculty of Arts decided in May to set aside strategic funds for a coordinator and administrative support to start a network for green humane or humanistic environmental research. The proposal was based on a survey previously published by the Faculty. The network is to invite visiting research fellows, organise national and Nordic network meetings, arrange international conferences in cooperation with other faculties and apply for research funds for a more long-term programme on green humanities. A series of faculty-wide seminars directed at research linked to the field of study will start during the year.

### Education for the future

The University of Gothenburg has been labelling courses and study programmes on the basis of environmental and sustainability considerations since 2006. New and more specific criteria for sustainability labelling were used in 2015. The intended learning outcomes for courses and study programmes will now clearly show whether any of the ten sustainability criteria have been satisfied (see *Sustainability perspective in Education* in the 'Education that Breaks New Ground' section). Criteria have been used in the subject teacher study programme as a basis for developing intended learning outcomes and elements of sustainable development in education. The Faculty of Education has reviewed the content and intended learning outcomes for all courses, compared them with these criteria and then proceeded with sustainability labelling. The Green Humanities network at the Faculty of Arts has also been mandated to initiate and coordinate education initiatives within the area. For example, an internal initiative is being pursued at the Department of Literature, History of Ideas and Religion to build up courses with a link to humanistic environmental research

The School of Design and Crafts (HDK) has a number of courses where sustainable development represents a prominent perspective. Issues relating to consumption, the environment, social conditions and sustainability are often problematized within design courses and study programmes. During the autumn, Master's students in design at HDK created works based on the age in which we live, on the theme of migration. These works were then displayed in a public exhibition called *Promiseland*.

### Toolboxes for teachers

The Centre for Environment and Sustainability (GMV), together with the faculties, has been assigned to develop faculty-adapted web-based tool boxes to help teachers to implement sustainable development in first-cycle courses and study programmes. A general web-based toolbox was launched for the faculties during the spring of 2015. This was then followed by faculty-adaptation work. GMV held three university-wide workshops for teachers on use of the toolbox during the autumn, with thirty or so participants. In the course of the workshops, teachers were allowed to try out using the toolbox under supervision to integrate sustainable development in their own courses and study programmes. All of the participants were very satisfied with the content of the workshop and the toolbox. The opportunity to have discussions with colleagues from their own area and from other subject areas was emphasised as being very positive.

### Student involvement from several perspectives

During the first week in May, 60 students from more than 20 countries met in Gothenburg for *EuroEnviro*, an annual student symposium that was organised this year by *Handels Students for Sustainability* (HaSS). The fundamental idea of *EuroEnviro 2015* was not only to provide students with tools and knowledge, but also the courage to launch their sustainable ideas by taking them step by step from idea to firm concept. The programme comprised workshops, lectures and talks within a number of areas.

Another conference on the theme of student involvement was arranged at the University of Gothenburg in November. The *Student Sustainability Summit* brought together student groups from 14 Swedish institutes of higher education that were able to exchange ideas and learn from each other over a weekend. The conference created opportunities for future cooperation to increase student involvement in sustainability issues at the University.

Several new student associations for sustainable development have been formed over the year, for instance at the Faculty of Arts and at the School of Global Studies. The *Gothenburg Students for Sustainability Alliance* (GSSA), bringing together all student associations whose work involves sustainable development at the University of Gothenburg and Chalmers, has been established to increase the preconditions for cooperation. GSSA arranged several joint activities in 2015, such as food rescue parties where the students prepared food from perfectly satisfactory raw materials that would otherwise have been thrown out.

### We affect the climate

The climate is highly topical

World leaders agreed on a new global climate agreement at the COP21 climate summit in Paris in December, including a long-term target to keep the increase in global temperature to below two degrees. One major challenge at the current time is that the countries'

collective national targets are not enough to achieve the 'two degree target', which imposes a high requirement on the efforts of other stakeholders to reduce their climate impact. Several climate researchers from the University of Gothenburg were in Paris, including Thomas Sterner who is Professor of Environmental Economics and Visiting Professor at the *College de France* during 2015 to 2016.

The University of Gothenburg has had a climate strategy since 2010, with the overall objective of reducing the University's carbon dioxide emissions by 20 per cent by 2015 compared to levels in 2008. Carbon dioxide emissions from energy use and travel on official business have reduced by 18 per cent since 2008. A number of successful activities were implemented during the period 2010 to 2015, and the climate strategy was awarded the distinction of *Excellence in Campus Award* by the *International Sustainable Campus Network (ISCN)* in 2014. The University management decided not to renew the climate strategy in 2015 but instead to integrate the work as part of the University's environmental management work.

**Climate buoys reduce carbon dioxide emissions**

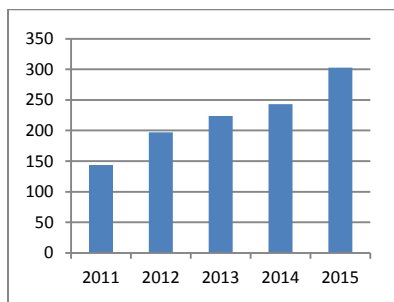
The University continued in 2015 to climate compensate all flights through two UN-approved climate projects that satisfy the *Gold Standard* quality mark. In 2014 funds from the Climate Fund were also announced for the first time at the University of Gothenburg, where part of the cost for climate compensation was used for internal projects to reduce the University's impact on the climate. One of the projects carried out in 2015 was

*Automatic satellite transmissions replace diesel-driven research vessels in the Antarctic*, which was run by the *Oceanography in the Southern Ocean* research group at the Department of Earth Sciences, with Professor Anna Wåhlin as the person responsible for the project. The project received money from the Climate Fund to place 'climate buoys' in the Antarctic. These buoys measure the temperature of the seabed and, with the help of this new technology, researchers will have time series sent home by satellite and thus be able to see the first results of how ice melting and seabed temperature are connected. Seven thousand tonnes of bunker fuel and two thousand tonnes of diesel fuel are used during an average expedition. The climate buoys mean that the number of trips to the Antarctic can thus be reduced from three to one in a six-year period, which involves major benefit to the climate. Further projects granted money from the Climate Fund were the purchase of an electric car, the purchase of electric boat engines and support for train journeys in conjunction with student conferences.

**Responsible procurements**

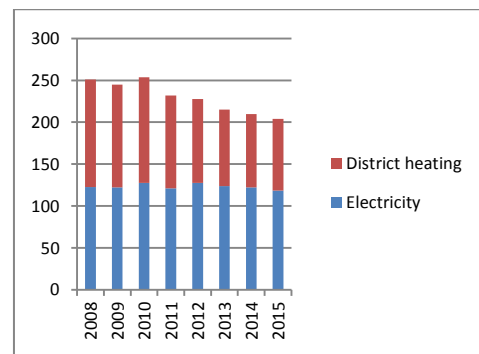
For some time the University of Gothenburg has actively and systematically worked to impose social, ethical and environmental requirements on suppliers and products in the procurements implemented. For example, 85 per cent of all fruit purchased for the University is ecological. Over the year several agreements have been concluded where significant environmental considerations have carried weight. The University now has a new supplier of courier bags

**Number of scientific articles within sustainable development, 2011-2015**



303 scientific articles within sustainable development were published in 2015, an increase of 25 per cent since 2014. A search covering the past five-year period is made every year to include publications subsequently reported.

**Average energy use 2008-2015 (kWh/m<sup>2</sup>)**



Energy use reduced by three per cent in 2015 compared to the previous year. Total energy use has reduced by 19 per cent since 2008. SMHI changed the calculation model for normal-year correction according to the degree day method in 2015. The energy use for 2008 to 2015 has therefore been recalculated according to the new method.



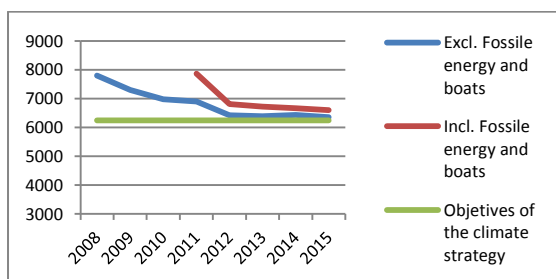
The Euro-Enviro student conference organised by students from the School of Business, Economics and Law in May.

within Gothenburg that only carries goods by bicycle. Goods up to two cubic metres and 200 kg are delivered by cargo bikes. The bike messenger service is the most environmentally friendly transport alternative that the University has and means that space is released and noise and energy consumption reduced compared with transport by motor vehicle.

The University of Gothenburg generally imposes high requirements within environment and sustainable

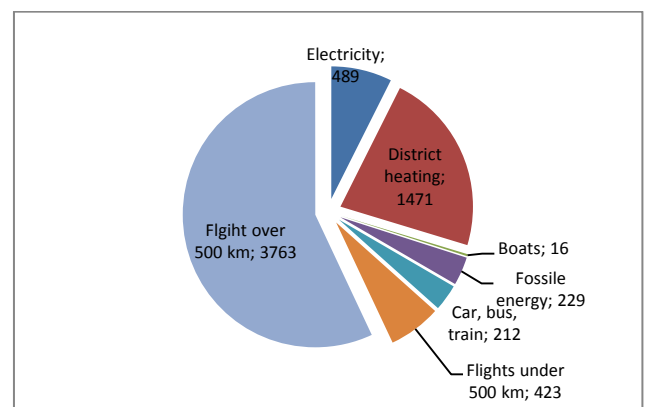
development in its catering procurements, but there is a separate sub-area in the framework agreement *Sustainable coffee breaks and catering* to make it easier for the people placing orders at the University. Suppliers are assessed partly on the basis of KRAV certification and partly on the basis of, for example, internal environmental work, social and ethical considerations, ecological footprints and transport.

**Total carbon dioxide emission 2008-2015 (tonnes)**



The University's objective was to reduce carbon dioxide emissions by 20 per cent by 2015 compared to 2008. Carbon dioxide emissions reduced by 18 per cent compared to the base year 2008. Carbon dioxide emissions, including fossil energy (natural gas and oil) and boats, only started to be measured in 2011 and are therefore shown separately.

**Carbon dioxide emissions for each source of emission, 2015 (in tonnes)**



Total carbon dioxide emissions amounted to 6,604 tonnes in 2015. Long-haul flights continue to comprise the largest source of emissions.



# GOAL ATTAINMENT FOR ENVIRONMENT AND SUSTAINABLE DEVELOPMENT, 2015

## Objectives for 2011 to 2015

## Results and indicators

The University will promote research within sustainable development in line with Vision 2020.	➤	Three hundred and three scientific articles dealing with sustainable development issues were published in 2015, an increase of 25 per cent compared to 2014
The University will increase the integration of sustainable development in education in accordance with Vision 2020.	➤	Eight per cent of courses (200 of 2,504 courses) and 13 per cent of study programmes (32 of 243 study programmes) have been sustainability-labelled, an increase of two percentage points for both courses and study programmes compared to 2014.
The University will strengthen its interaction with the surrounding society within sustainable development in line with Vision 2020.	➤	The University provided 540 activities focussed on sustainable development over the year <sup>1</sup> .
The University will increase the number of activities and cooperation projects within sustainable development for students.	➤	The number of activities and cooperation projects within sustainable development for students was 217, an increase of 43 per cent since 2014.
The University will ensure that everyone in a managerial position with responsibility for staff has taken a course in environmental management.	➤	Nine per cent of the employees with management competence (21 of 228 employees) took the environmental management course in 2015. Eleven of these participants were women and ten were men. One hundred and fifty-two people in management positions have taken the environmental management course since 2011.
The University will work to strengthen the skills of staff within sustainable development.	⚠	17 per cent (940 persons) of the University's employees have participated in some form of competence development within sustainable development in 2015, a reduction of six percentage units since 2014.
The University will reduce carbon dioxide emissions from travel on official business and energy by 20 per cent by 2015 compared to 2008.	➤	Total carbon dioxide emissions from energy use and travel on official business in 2015 were 6,604 tonnes, a reduction of one per cent since 2014 <sup>2</sup> . ● The objective has not been achieved. Total carbon dioxide emissions have reduced by 18 per cent since 2008.
The University will reduce energy usage by ten per cent per square metre by 2015 compared to 2008.	➤	The total consumption of electricity and heating was 204 kWh/m <sup>2</sup> , a reduction of three per cent since 2014. ● The objective has been achieved. Total energy use has reduced by 19 per cent since 2008 <sup>3</sup> .
The University will increase the proportion of procurements (measured in economic value) for which social, ethical and environment requirements have been set.	⚠	Environmental requirements were imposed in 40 per cent of the procurements, measured in economic value (171 of 429 million Swedish kronor), a reduction of 41 percentage units since 2014.
The University will reduce the total quantity of waste by ten per cent by 2015 compared to 2009.	➤	The total amount of waste amounted to 1,098 tonnes, a reduction of seven per cent since 2014. ● The objective has been achieved. The total amount of waste has reduced by 26 per cent since 2009
The University will increase the proportion of waste subjected to material recovery or composted by ten percentage units by 2015 compared to 2009.	➤	The proportion of waste subjected to material recovery or composted is 39 per cent, a figure that has remained the same since 2014. ● The objective has not been achieved. The proportion of waste subjected to material recovery or composted has increased by eight percentage units since 2009.
The University will reduce the number of chemical products included in the SIN list that are found at the University by at least five per cent by 2015 compared to the result for 2012.	⚠	The number of chemical products included in the SIN list that are found at the University was 1,946, an increase of twelve per cent since 2014. ● The objective has not been achieved. Since 2012, the number of chemical products included in the SIN list that are found at the University increased by 29 per cent.
The University will minimise the number of incidents that lead to an adverse impact on the environment and work towards minimising the consequences of any possible incidents.	➤	Four incidents with adverse consequences for the environment occurred in 2015. ➤ Fourteen activities were implemented with a view to reducing the occurrence of incidents with an adverse environmental impact.

1. The statistical basis from and including 2015 was obtained purely from GU's and GMV's calendar as well as from information about public activities at the Sven Lovén Centre for Marine Sciences, for which reason it is not possible to make a comparison with previous years.

2. Carbon dioxide emissions from boats or fossil energy (natural gas and oil) were not included in the comparison with 2008 as the base year, as these emission sources only started to be measured in 2011. Emissions from boats and fossil energy are therefore included in the comparison with 2014.

3. SMHI changed the calculation model for normal-year correction according to the degree day method in 2015. Energy consumption for 2008 to 2015 has therefore been recalculated according to the new method.

➤ Positive result for the year

● Objective achieved for final year 2015

⚠ Negative result for the year

● Objective not achieved for final year 2015

➤ Result unchanged/comparison with previous years not made