



# Environmental report 2019



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accreditation no 1002, auditor Lena Jönsson

*Date of approval: 26 March 2020*

**Environmental report 2019**

**Publication year:** Uppsala 2020

**Publisher:** SLU Environment

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**Cover photo:** Jenny Svennås-Gillner, SLU, profiling collage with photos of SLU operations.

**Print:** SLU Service, Repro

# Preface

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**SLU operations concern the foundation of our existence. Our employees and students are important actors when meeting the Agenda 2030 Sustainable Development Goals, and we work to meet global challenges such as food security and climate change. Some of our important duties are researching and teaching considerations between production and environmental objectives. This means that we have the base of facts required to make wise decisions, endeavour to live as we learn, do our very best with the resources at our disposal and conduct our operations and activities with the least possible environmental effect.**

SLU works systematically with environmental issues and has chosen to certify our operations and activities according to the ISO 14001 standard and EMAS. In 2019, the university has worked intensely with managing and developing the eleven certificates SLU holds. We work actively with identifying and measuring our environmental aspects, establishing environmental objectives, following up aspects and objectives and ensuring that we do what we have said we will.

In 2019, we implemented a number of improvements, both large and small. A large improvement was when SLU's management decided to sign a climate framework for universities and higher education institutions where we commit to work in line with the Paris Agreement.

All objectives and focus areas are mentioned in the environmental report. Here is a selection of what was implemented in 2019:

- new environmental objectives relating to purchasing were approved;
- SLU has also signed Uppsala County's measure programme for reduced climate impact that lists concrete measures we must implement;

- we began developing new degree programmes that focus on sustainability.

SLU has maintained the breaks in trends from 2017 and 2018, and we see continued reduction of air travel. In fact, in 2019, we met the objective set for 2020. We have also saved many tonnes of CO<sub>2</sub> through the transition to bio-based fuel in farms in Uppsala and on Gotland, and we have accomplished a lot both within research and our own biodiversity operations.

When I look back on 2019, I feel satisfied about all the things our university has accomplished in environmental field, but I also see that we have a long way to go in order to, among other things, become a climate neutral university by 2027. Let us actively continue with our environmental work, now and in the future.



*Maria Knutson Wedel,  
Vice-Chancellor of SLU*



# Content

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<b>Introduction</b>	<b>3</b>
<b>Content</b>	<b>4</b>
<b>About SLU</b>	<b>5</b>
<b>Mission statement</b>	<b>5</b>
<b>Environmental policy</b>	<b>5</b>
<b>Environmental management system</b>	<b>5</b>
<b>The 2019 environmental year (performance)</b>	<b>7</b>
<b>SLU climate fund</b>	<b>9</b>
<b>PRME Certification</b>	<b>10</b>
<b>Production of fossil-free electricity</b>	<b>11</b>
<b>Environmental indicators</b>	<b>12</b>
<b>Environmental objectives and 2019 results</b>	<b>14</b>
1 Teaching and learning	14
1.1 Sustainable development within programmes	14
1.2 Course evaluation	15
1.3 Workshop: education relating to sustainable development	15
1.4 Continuing professional development: education relating to sustainable development	15
1.5 Alumni: sustainable development in professional roles	15
2 Environmental monitoring and assessment	16
2.1 Environmental data management: quality guide	16
3 Use of energy	16
3.1 Electric energy and district heating/cooling	16
3.2 Self-sufficiency	17
3.3 Energy savings	17
4 SLU's own vehicles	18
5 Purchases	18
5.1 Procurement	18
5.2 Environmental requirements in procurements	18
5.3 Follow-up of procurements	19
6 Business travel	20
6.1 Total sum for work-related travel	20
6.2 Domestic business travel	21
6.3 IT-travel (video conferencing)	21
7 Climate compensation	22
8 Operation-specific environmental objectives	22
<b>Laws and other requirements</b>	<b>23</b>
<b>What happens in the coming period?</b>	<b>24</b>
<b>The Environmental Unit at SLU 2019</b>	<b>25</b>
<b>Appendix 1 Core indicators</b>	<b>26</b>

# About SLU

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**SLU improves our knowledge on how to use biological natural resources on land and at sea in a sustainable way. SLU conducts education, research and environmental analysis at over thirty locations around the country. The largest campus areas are in Uppsala, Alnarp and Umeå. In 2019, the university had 3,062 full-time equivalents among employees and 3,906 among students.**

SLU has four faculties, under which there are a total of 34 departments:

- the Faculty of Landscape Architecture, Horticulture and Crop Production Science (LTV);
- the Faculty of Natural Resources and Agricultural Science (NJ);
- the Faculty of Forest Sciences (S);
- the Faculty of Veterinary Medicine and Animal Science (VH).

SLU also has a university administration with 15 divisions. Its main task is to provide support for research and education.

## Mission statement

“SLU develops the understanding and sustainable use and management of biological natural resources. This is achieved by research, education and environmental monitoring and assessment, in collaboration with the surrounding community.”

## Environmental policy

“SLU contributes to an ecologically, socially and financially sustainable development. Environmental thinking and environmental aspects are integrated in all decision-making and are part of all activities within SLU’s organisational units.

The environmental work at SLU is a long-term process which builds on continuous improvement and is based on the environmental regulations in force.”

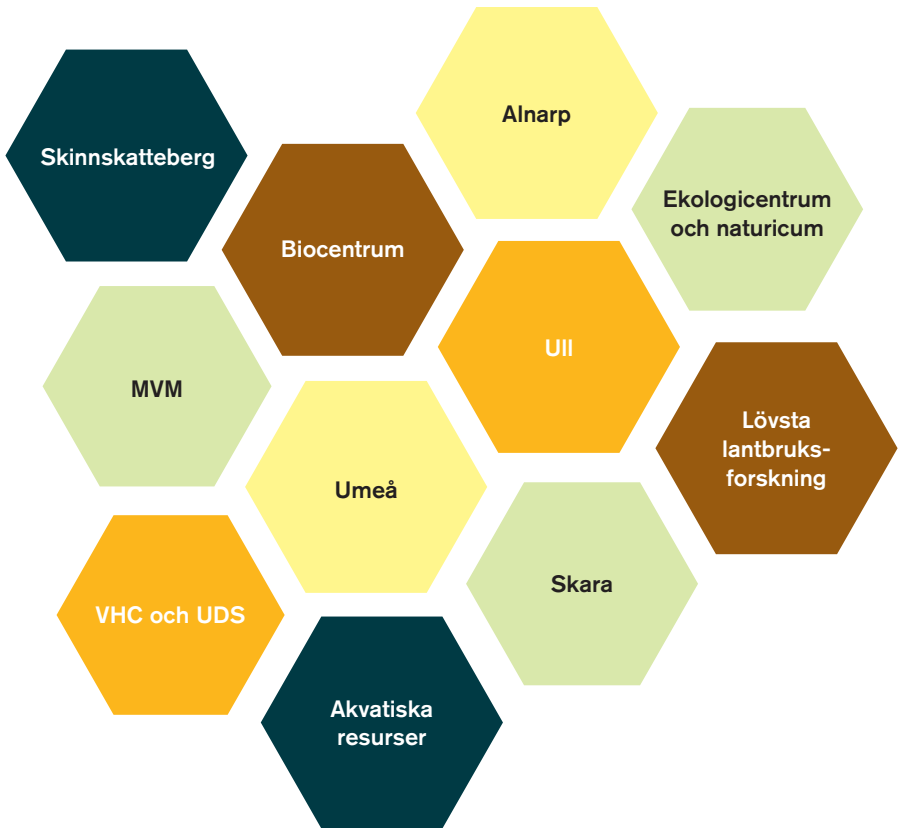
## Environmental management system

SLU complies with the environmental management standards ISO 14001 and EMAS. This means that the university conducts structured environmental work and follows up on the environmental aspects of its operations. The Vice-Chancellor has the ultimate responsibility for SLU’s environmental work, and the university management decides on any improvements. In 2009, the Vice-Chancellor decided that all of SLU would be certified according to the ISO 14001 standard. From 2003 to 2016, various SLU operations were successively certified. Today, SLU holds eleven certificates. In 2019, it was decided that the eleven certificates would be compiled in one joint certificate for the whole university.



The current eleven certificates differ in content depending on the location, faculty, building or, in some cases, department. The spread of certificates across the country reflects SLU's spread both in terms of operational areas and geographical locations. The university management and vice-chancellor are included in Ull's certificate, where the general environmental objectives and university-wide guidelines are developed.

The Environment Unit coordinates and reports on environmental work at university-wide level. For example, the Environment Unit develops general environmental objective proposals and coordinates internal environmental audits. Everyone at the university takes part in environmental work. Each certificate has its own environmental coordinators, representatives and environmental management.



# The 2019 environmental year (performance)

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**Several new environmental projects were launched in 2019, some environmental objectives were concluded and new ones were developed. It was also a year filled with commitment from stakeholders, including researchers, other employees and students at SLU.**

Once again, SLU was ranked second of all Swedish public authorities in the Environmental Protection Agency's follow-up of public authorities' environmental management work.

During the year, SLU signed Uppsala county administrative board's sustainability pledge. SLU has committed to implement a selection of measures from the county administrative board's regional measure programme "Färdplan för ett hållbart län" (sustainable county roadmap). SLU also signed a joint climate framework for universities and higher education institutions in Sweden. Based on the framework, every included higher education institution must develop a concrete climate strategy. The objective is to be in line with the 1.5-degree objective by 2030, which is completely in line with the vision of SLU becoming climate neutral by 2027. A new inquiry of SLU's CO<sub>2</sub> print was conducted according to the Greenhouse Gas Protocol. It concerned all SLU emissions, and for the first time, we can compare it to the inquiry based on the numbers from 2015.

In the summer of 2018, Akademiska hus began installing solar cells that

provide its largest production of electric energy. The cells can be found at the Ultuna campus. Production began in autumn 2019. A considerable number of Ultuna roof spaces are now covered with solar cells. Together with previously installed cells, almost 1 GWh solar electricity can be produced every year.

At the Grimsö Wildlife Research Station, there is a project that investigates the possibility of building a hydroelectric plant. The plant is expected to generate 300 MWh. The matter will be tried in the Land and Environment Court in autumn 2020. In Alnarp, SLU has applied for a building permit for a small wind turbine of 124 kW. Old windows have been replaced with energy-efficient ones at various SLU sites. Additionally, regular strip lights have been replaced with LED lights.

SLU is annually audited both externally, by the certifying body RISE, and internally, by SLU's own staff. RISE found several non-conformities, and all system deficiencies have been taken care of. In 2019, SLU had about 15 qualified and approved internal auditors. During the year, another student was appointed

internal auditor. In total, there are three involved students.

The research vessel Svea now belongs to SLU. Before the vessel was designed and when the dock was procured, the Environment Unit took part in the discussion and requirement process. During the year, work with adding the vessel into environmental management activities continued, among other things through an internal environmental audit in November. We estimate that Svea will be fully included in the environmental management system as of spring 2020.

The Environment Unit received many good improvement proposals from operations and students throughout the country. The proposals were of a wildly different character and scale. Some areas are more prominent than others, including business travel (travel guidelines deficiencies, difficulties booking train tickets abroad, considerations for meeting scheduling, too few meeting rooms with video link capabilities etc.), bicycle-promoting measures, food purchases and use of disposable materials. All submitted matters have been processed and several resulted in concrete improvement measures. For example, a popular seminar on train-based business travel in Europe was held in the spring. SLU's environmental manager, travel manager, the CEO of "Stiftelsen för svensk lantbruksforskning" (SLF) and a representative from the travel agency provided information and answered questions about business travel and

travel agency support.

During the year, focus was placed on updating employees and students on environmental management activities. An e-training course – nano-learning – was sent to all employees and students. The purpose was to provide information on SLU's environmental management activities and what employees and students need to know. The course took a couple of minutes and was concluded with a quiz.

Now, employees can personally book video meetings in Outlook, which has furthered the use of digital meetings since it is no longer necessary to submit a video conference booking to AV support. The biggest news within video infrastructure in 2019 was the launch of SLU's Play-channel ([play.slu.se](https://play.slu.se)). Lectures used for distance learning, event material, instruction videos, etc. are published on the channel.

In autumn, new objectives for business travel and SLU travel guidelines began to be developed. This will continue in 2020. The Environment Unit, together with the Division of Human Resources, developed the travel habit survey. The purpose was to get a snapshot of travel habits, both to and from work and business trips. The survey was sent to all employees during the autumn. The response frequency was about 50 per cent.

Since September 2019, SLU has a joint reporting system for matters (non-conformities and improvement proposals) relating to environment, work environment and security.



About 80 environmental matters were submitted in autumn.

As of 2019, the Purchasing and Procurement Unit will handle all procurements that exceed the monetary limits for direct procurement. The Environment Unit conducts environmental analysis of all procurements that include environmental requirements. For

example, Ultuna procured three tractors and a combine harvester in 2019. The requirement for this was that HVO100 was the approved fuel. Since October 2017, all of their 14 diesel-powered machines and vehicles have run on HVO. This means that Ultuna has avoided releasing almost 400 tonnes of CO<sub>2</sub> since it started using HVO100.

## SLU Climate Fund

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**In June 2014, the vice-chancellor decided that SLU would introduce a climate fund as a part of its efforts pertaining to the environmental goals regarding business travel.**

The Climate Fund had a three-year test period and was, after evaluation in 2018, extended by another three years. The fund will be evaluated again at the end of this new three-year period.

Each one-way flight is subject to a fee; the amount varies depending on the type of trip:

- domestic – SEK 100;
- Europe – SEK 200;
- intercontinental – SEK 300.



In autumn of 2019, funds from the Climate Fund were awarded to 13 projects:

- purchase of an electric feed mixer;
- GPS anchoring motor;
- electric cars and charging points;
- paper containers for pipettes;
- synergy control;
- video conference equipment;
- LED lights in the Lövsta farm;
- energy mapping;
- train travel to Portugal and travel diary.

# PRME Certification

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**PRME (Principles for Responsible Management Education) is a UN initiative to create a platform for educating future business leaders who are able and willing to work with sustainable development in business management.**

The Department of Economics offers sustainability-oriented Master's programmes in business administration. The certification applies to the entire university, all campuses and programmes, although the PRME certification is subject-based. In 2018, SLU began working on the documentation needed for renewed

certification (March 2019). With the aid of the UN and Global Compact, PRME has quickly risen in prominence, and the certification makes SLU more attractive to students, future employees and partners looking for a sustainability- and future-oriented university.

**PRME** Principles for Responsible Management Education



# Production of fossil-free electricity

**SLU produces its own electricity and heat. We have a biogas plant, solar cells and biofuel boilers.**

In 2019, SLU produced a total of 2,905 MWh of electricity and 9,370 MWh of heat. SLU's total consumption in rented and owned premises was 27,220 MWh of electricity and 29,560 MWh of heating/cooling. The degree of self-sufficiency in rented and owned premises was thus 11 per cent for electricity and 32 per cent for heating.

The production for 2019 can be broken down as follows:

- biogas plant, electricity: 2,870 MWh;
- solar cells, electricity: 35 MWh;
- biogas plant, heating: 2,660 MWh;
- biofuel boilers, heating: 6,710 MWh.



# Environmental indicators

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**The environmental indicators provide management with data to evaluate the university's environmental performance and identify areas of the environmental work which need improvement.**

SLU has identified the activities that have a positive and/or negative environmental impact, referred to as significant environmental aspects. These activities have become focus areas for the university's environmental work and how the university continuously strives to improve its environmental aspects. The work includes taking environmental factors into consideration during purchasing and procurements, devising new meeting methods which reduce the university's greenhouse gas emissions and disseminating knowledge about environmental and sustainability issues. The significant environmental aspects are selected using a method which strives to weigh up factors such as consumed volumes, impact on Swedish environmental objectives and life cycle perspectives. The purpose of the method is to determine the ways in which SLU has the greatest environmental impact, be it positive or negative.

SLU's significant environmental aspects, positive and/or negative, include:

- **Education:** by educating students on sustainability, food production, energy, etc., we hope to give the next generation of decision-makers the tools to make good decisions.
- **Research and testing:** in, for example, SLU's interdisciplinary future platforms (Future Animals, Nature and Health, Future Food, Future Forests and Urban Futures) researchers collaborate across disciplinary borders and with various stakeholders in society. Some research findings have had particularly significant impact on society, and research relating to gender is being conducted in several places.
- **Environmental monitoring and assessment:** SLU has a societal remit which is unique among Swedish universities. In addition to education and research, SLU is tasked by the Swedish Government with conducting environmental monitoring and assessment (EMA). Through EMA, we give decision-makers data on the state of the environment, primarily in Sweden.
- **Energy consumption:** through our work, we consume energy in the form of electricity and heating/cooling. In many cases, this causes emissions of, for example, CO<sub>2</sub> and other environmentally hazardous substances.
- **Business travel:** we sometimes need to travel as part of our work, and this travel results in emissions of CO<sub>2</sub> and other substances.

- **Purchases:** SLU procures and purchases products and services amounting to several million every year. It is important to ensure that the procurements are of the highest possible standard from an environmental perspective. The purchases can generate emissions in other parts of the world, such as when purchasing IT products, and it is important to have a life-cycle perspective. Purchases of plastic (packaging and products) is another example where SLU can make a difference by choosing wisely.
- **Vehicles and fuels:** SLU owns many different vehicles, and they run on different types of fuel. Using fuel generates CO<sub>2</sub> emissions and other substances hazardous to the environment.
- **Forestry and agricultural operations:** SLU has farming and forestry operations covering around 6,000 hectares, which has both a negative and a positive impact on the environment.
- **Livestock units:** SLU owns about 1,000 livestock units that affect the environment both positively and negatively. For example, cattle emit methane but also graze on fields and promote biodiversity. SLU livestock primarily contribute to research and education in sustainable animal husbandry.
- **Conventional and hazardous waste, as well as electronic waste:** SLU operations generate different types of waste, which in turn can result in

emissions during final processing, in Sweden or abroad.

- **Antibiotics:** antibiotics are used in SLU's animal husbandry activities as well as by the University Animal Hospital (UDS). The biggest risk linked to the use of antibiotics is the threat of resistant bacteria. SLU is conducting prominent research and collaborations to reduce the use of antibiotics throughout the world.
- **Chemicals:** All SLU laboratories, forestry and agricultural operations and other activities use many different types of chemicals. Possible emissions can affect air, water and land.
- **Sewage treatment:** SLU's sewage treatment plant purifies waste water from a slaughterhouse, among other places. The recipient is located in a Natura 2000 area, and ponds have been established to try to minimise the risk of emissions of, primarily, substances which can cause eutrophication.



# Environmental objectives and 2019 results

**The UN's climate goals are clear: global greenhouse gas emissions must be halved by 2030 and almost gone by 2050.**

SLU is an environmental authority that wants to practice what it preaches and also sees the importance of managing its own climate emissions in its role as a public authority. SLU's largest emission sources come from/are generated through business travel, district heating/cooling, commercial fertilisers, non-road mobile machinery and other vehicles as well as livestock units. Of the significant environmental aspects, the university has

chosen to set environmental objectives for education and EMA as well as energy consumption, purchases and business travel. Additionally, SLU's management has decided to become climate neutral by its 50th anniversary (2027). This vision includes further environmental objectives. The vision will allow SLU to contribute to reaching the objectives set in the Paris Climate Agreement and Sweden's national objective of being climate neutral by 2050.

## 1. Teaching and learning<sup>1</sup>

**All students participating in one of SLU's programmes should, ahead of their future professional roles, receive a good foundation for working with a sustainability perspective (financial, social, and environmental).**

### 1.1 Sustainable development within programmes<sup>2</sup>

Integrate sustainable development into all programmes (100 per cent) by 2020.

*Results:* SLU has 23 programmes which start at first-cycle level (excluding foundation years). Some are Bachelor's programmes, but most are professional programmes which continue on to second-cycle level after the first three years. The vast majority (90 per cent) of SLU's programmes include sustainability aspects as part of their profile, and in 21 out of 23 programmes, this is included in the description and programme syllabuses, although the programme syllabuses need to be made clearer in two cases. SLU also offers 20 Master's programmes, where most are international and taught in English. In all 20 Master's programmes, sustainability aspects make up a significant part of the programme profiles and are included in the programme syllabuses. In a few cases, the programme syllabuses can be made clearer.

## 1.2 Course evaluation<sup>3</sup>

Have at least 70 per cent positive responses in course evaluations when asking if sustainability has been integrated into education no later than 2020.

*Results:* The average for this course evaluation question in 2019 was 4.06 out of 5 across all SLU courses. This corresponds to 80 per cent, meaning that the objective has been met.

## 1.3 Workshop: education relating to sustainable development<sup>4</sup>

At least once per year, hold a workshop with programme directors of studies in order to share experiences and further develop sustainable development education.

*Results:* A workshop was held during SLU's education conference in 2019.

## 1.4 Continuing professional development: education relating to sustainable development<sup>5</sup>

Before the end of 2020, at least 80 per cent of all course leaders/course coordinating teachers will participate in a one-day professional development for sustainable development course.

*Results:* So far, around 80 per cent (330 people) have been trained.

## 1.5 Alumni: sustainable development in professional roles<sup>6</sup>

At least 70 per cent of alumni will, when asked, state that their programme has given them tools to work with all three dimensions of sustainable development in their professional roles.

*Results:* Alumni follow-up is in a test phase and will most likely take place every other year. This question will be included.

<sup>1</sup>SLU-internal environmental objective 4.4

<sup>2</sup>SLU-internal environmental objective 4.4.1

<sup>3</sup>SLU-internal environmental objective 4.4.2

<sup>4</sup>SLU-internal environmental objective 4.4.3

<sup>5</sup>SLU-internal environmental objective 4.4.4

<sup>6</sup>SLU-internal environmental objective 4.4.5



## 2. Environmental monitoring and assessment

**In order to contribute more to societal environmental work, SLU has a general environmental objective to increase the use of data generated through SLU's environmental monitoring and assessment for national decision-makers, public authorities, researchers and public.**

### 2.1 Metadata concerning environmental analysis data<sup>7</sup>

By the end of 2020, at least 80 per cent of all operations taking part in SLU's quality enhancement activities will provide open web data in accordance with the current environmental data management quality guide.

*Results:* Of all the operations that took part in the quality work, barely 10 per cent met the requirements by the end of 2019. The objective is deemed possible to meet in 2020.

## 3. Energy consumption

**Consuming various types of energy impacts the environment in many different ways. SLU has several types of operations which are relatively energy-intensive and we have therefore chosen to set objectives in this area.**

### 3.1 Electric energy<sup>8</sup> and district heating/cooling<sup>9</sup>

All electrical energy and district heating/cooling purchased or consumed by SLU will be from fossil-free sources.

*Results:* SLU only purchased and consumed fossil-free energy in 2019. The district heating/cooling purchased or consumed by SLU in 2019 was 65 per cent fossil-free.



### 😊 3.2 Self-sufficiency<sup>10</sup>

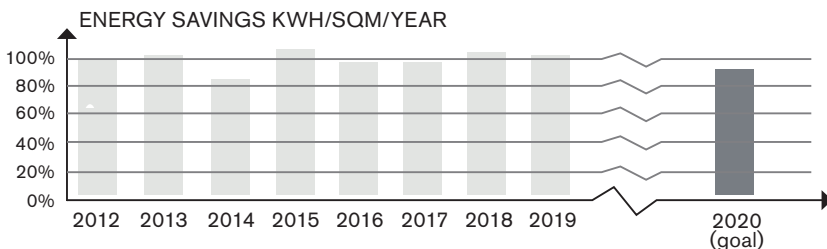
Using 2014 as the base year, SLU will increase its self-sufficiency when it comes to electrical energy in rented and owned properties by at least 13 per cent by 2020. When it comes to heating, the self-sufficiency will remain above 90 % per cent SLU's own properties.

*Results:* The self-sufficiency in rented and owned premises in 2019 was equal to 10 per cent renewable electrical energy. The self-sufficiency for heating in 2019 was 86 per cent for SLU's own properties.

### 😞 3.3 Energy savings<sup>11</sup>

SLU will save at least 1 per cent of energy per m<sup>2</sup> and year in its own properties, using 2012 as the base year. In other words, SLU will have saved at least 9 per cent energy per m<sup>2</sup> by 2020.

*Results:* The 2019 energy consumption has increased by 1.5 per cent since 2012 in SLU's own properties. The increase is explained by premises being rented out to a larger extent.



<sup>7</sup>SLU-internal environmental objective 5.4

<sup>8</sup>SLU-internal environmental objective 6.1

<sup>9</sup>SLU-internal environmental objective 6.2

<sup>10</sup>SLU-internal environmental objective 1.1

<sup>11</sup>SLU-internal environmental objective 1.3

## 4. SLU's own vehicles<sup>12</sup>

**SLU owns numerous vehicles of different kinds, e.g. cars, farming and forestry machines, scooters, ships, quad bikes, wheel loaders etc. In many cases, the fuel consumption of these vehicles is an environmental issue.**

### 4.1 SLU's own vehicles

All SLU-owned motor vehicles, machines and tools will run on non-fossil fuels by 2027.

*Results:* Motor vehicles, machines and tools owned by SLU can in 2019 be broken down as follows: electric 4 per cent, hybrid 3 per cent, methane 1 per cent, petrol 24 per cent and diesel 68 per cent. Of the total diesel consumption, at least 50 per cent was fossil-free diesel. The Ultuna properties are responsible for most usage of fossil-free diesel. NB. SLU's research vessel Svea has not been included in the results. The vessel only runs on fossil-free diesel (HVO100).

## 5. Purchases

### 5.1 Procurement<sup>13</sup>

Procurement of goods and services will be clearly characterised by climate awareness.

*Results:* Largely satisfactory results. When relevant, energy consumption must be acknowledged as much as possible for procurement of products, services and buildings. The number of procurements with environmental requirements are affected by the type of procurement in question. SLU operations are broad, and it is not unusual that very specific products are procured. In most cases, there is only one supplier, which affects environmental requirements.

### 5.2 Environmental requirements in procurements<sup>14</sup>

SLU purchases goods and services worth around SEK 1.7 billion per year, which entails all kinds of impacts on the environment. All procured agreements, where environmental requirements are seen as relevant from an environmental risk analysis, will result in good environmental choices being identified where available. This must be done no later than 2019. Goods and services which are or could be marked as good environmental choices should, if technically possible, be available and identified with a green leaf in the e-commerce system Proceedo.

*Results:* In 2019, all signed agreements have been subjected to an environmental risk analysis. In eight of these procurements, the environmental risks resulted in specific environmental requirements. For example, during the procurement of tractors and combine harvesters, a requirement was that HVO100 was the approved fuel. The IT procurement states, among other things, that the supplier will receive financial benefits if they present proactive measures for increased sustainability, for example through supplier-adjointing environmental audits, working to reduce conflict minerals and using smart solutions to increase recycling of superannuated/used products. The same applies if they offer joint deliveries for the whole of SLU, using vehicles only powered by fossil-free fuel. The supplier must also ensure that SLU's standard range always offers some product in each segment that have spearheaded environmental characteristics, and therefore are TCO-certified, etc. Additionally, cables cannot contain phthalates.

### 😊 5.3 Follow-up of procurements<sup>15</sup>

There will be an annual follow-up of at least one procurement in order to determine if, and to what extent, reduced environmental impact has been achieved.

*Results:* In 2019, the following procurements were followed up: plant protection products, plant nutrients and seeds. The supplier submitted evidence certifying that the requirements were met. For example, the cadmium content in phosphorus fertiliser and carbon footprint from nitrogen fertiliser did not exceed our maximum limits. Additionally, all seeds were thermo-treated.



<sup>12</sup>SLU-internal environmental objective 6.3

<sup>13</sup>SLU-internal environmental objective 6.4

<sup>14</sup>SLU-internal environmental objective 3.5

<sup>15</sup>SLU-internal environmental objective 3.6

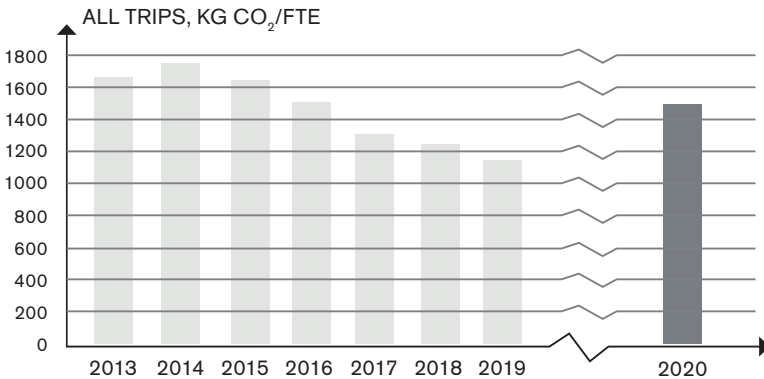
## 6. Business travel<sup>16</sup>

**SLU's operations are spread across the country, along with many international contacts, collaborations forms and research projects, which entails frequent business travel. Emissions from business travel will be reduced according to the existing action plan and objectives.**

### 6.1 Total sum for work-related travel<sup>17</sup>

SLU will reduce the carbon dioxide emissions from travel by at least 10 per cent per employed full-time equivalent by 2020 compared to 2013.

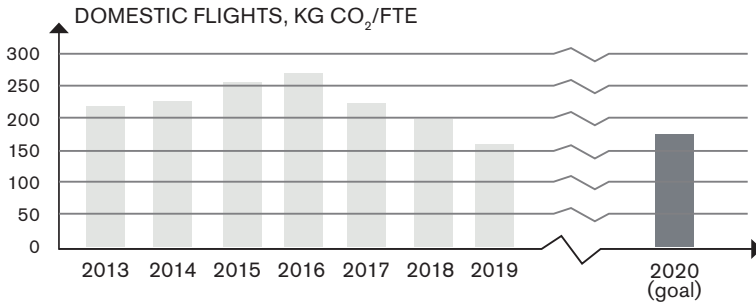
*Results:* In 2019, SLU has reduced carbon dioxide emissions from travel by 30 per cent per full-time equivalent (FTE) compared to 2013.



## 😊 6.2 Domestic business travel<sup>18</sup>

Carbon dioxide emissions from domestic flights will be reduced by at least 20 per cent per employed full-time equivalent by 2020 compared to 2013.

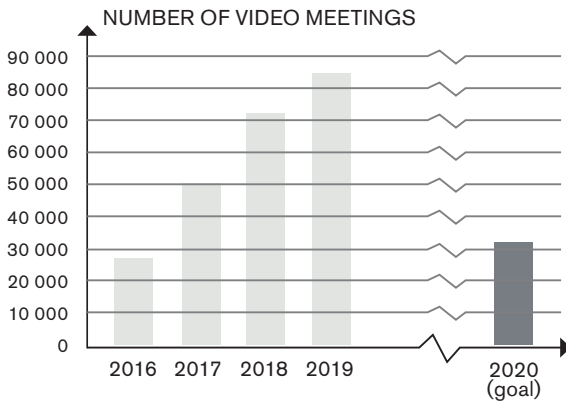
*Results:* In 2019, SLU reduced carbon dioxide emissions from domestic flights by 28 per cent per full-time equivalent (FTE) compared to 2013.



## 😊 6.3 IT-travel (video conferencing)<sup>19</sup>

IT travel (video conference meetings) will increase by at least 15 per cent by 2020, compared to 2016.

*Results:* The number of video conference meetings has increased by 199 per cent since 2016.



<sup>16</sup>SLU-internal environmental objective 6.5

<sup>17</sup>SLU-internal environmental objective 2.1

<sup>18</sup>SLU-internal environmental objective 2.4

<sup>19</sup>SLU-internal environmental objective 2.5

## 7. Climate compensation<sup>20</sup>

SLU cannot eliminate climate gas emissions from its operations completely, due to reasons such as some flights being necessary and our ruminants being crucial to our operations. SLU therefore intends to compensate for these emissions.

*Results:* An investigation into how to efficiently and transparently compensate for our emissions will be conducted in 2020.

## 8. Operation-specific environmental objectives

In addition to SLU's university-wide environmental objectives, many operations have their own environmental objectives, including:

- Investigate whether it is possible to reduce water usage by changing working methods and equipment by 2019. (VHC and UDS)
- Reduce the amount of unsorted and combustible waste and increase the amount of sorted waste in relation to the total waste amount at VHC. The long-term objective is that all recyclable waste will be sorted. (VHC and UDS)
- Implement measures on SLU soil that benefit biodiversity, for example through protected zones, areas for larks, micro wetlands, organic farming and various initiatives to benefit pollinators. (Ull)
- Starting 1 January 2019 and by 31 December 2021, endeavour to ensure that there are no domestic flights within SLU Skara operations. (Skara)
- By 2021, endeavour to ensure that the Department of Ecology increases its number of full-time equivalent students by 10 per cent compared to 2018. (Ecology Centre and Naturicum)
- In collaboration with external organisations, launch read and write APIs to facilitate reports submitted to the Swedish Species Information Centre and increase commitment to species and environmental protection. (Ecology Centre and Naturicum)
- Annually assess at least 10 degree projects at first- or second-cycle level. (Aquatic Resources)

<sup>20</sup>Focus area 6.6

# Laws and other requirements

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**SLU operates under many laws, regulations and other requirements when it comes to environmental work. All requirements are available in a legislation list. To ensure that we fulfil the requirements and expectations placed on us, internally and externally, we annually carry out a compliance review where we in 2019 noted further improvement potential when it comes to internal waste management. Several public authorities also supervise our work through annual reports, inspections and reviews.**

In addition to outright laws and regulations, there are other collaborations where SLU has promised to contribute in various ways. This includes the Uppsala Climate protocol,

having bike-friendly workplace, a climate framework for universities and higher education institutions and not least the entirety of the Sustainable Development Goals in Agenda 2030.



# What happens in the coming period?

There are great environmental challenges at SLU in the future. Below are a number of items which the university are highlighting during the coming period.

- **New environmental objectives relating to business travel as well as new meeting and travel guidelines.**

The environmental objective period for business travel expires soon. New objectives will be developed, and meeting and business travel guidelines will be reviewed.

- **New environmental objectives relating to energy consumption/production.**

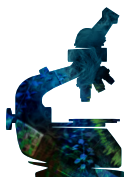
The environmental objective period for energy consumption and production expires soon. New objectives will be developed.

- **Food and catering guidelines** will be produced utilising SLU's own extensive knowledge in this area.

- **Climate-neutral university:** In the coming year, work continues in the six focus areas related to our vision of becoming a climate-neutral university by 2027.

- **SLU's research vessel Svea** will be included in the environmental management system. An external environmental audit has been scheduled for March 2020.

- **One certificate:** SLU's eleven certificates will be compiled into one certificate. An external environmental audit has been scheduled for February 2021.





# The Environment Unit at SLU 2019

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**The SLU environmental report was developed by employees at the Environment Unit: Johanna Senmark, Karin Bäckman and Kristin Thored.**

More information on SLU's environmental work can be found on the website: <https://internt.slu.se/miljo>. You can contact the Environment Unit at [miljo@slu.se](mailto:miljo@slu.se).



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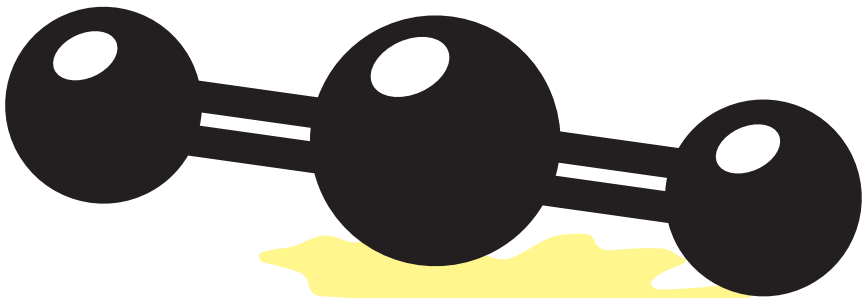
# Appendix 1: Core indicators

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**In the environmental report, the organisations must provide core indicators as long as they relate to the organisations' direct environmental aspects and other existing relevant indicators for environmental performance as described below.**

Presentation of core indicators for environmental performance according to EMAS III. Each core indicator consists of the following:

- Number A, specifying the total annual addition/impact in the given area.
- Number B, specifying the organisation's total annual production. (As the university is not part of the production sector, but rather the administration/services sector, the productivity number represents the number of employee full-time equivalents, 3,062.)
- Number R, signifying the A/B ratio.



Field	Core indicators	A	R	Comment
Energy efficiency	Total annual energy consumption, MWh (a).	57 194	18,5	
	Percentage of a that is from renewable energy sources produced by the organisation (b).	20,7		
Material efficiency				Not reported. SLU is a service company and thus has no material flows of significant environmental importance.
Water	Total water consumption, m <sup>3</sup> .	274 967	89,8	
Waste	Total annual waste production, excluding hazardous waste, in tonnes.	Misc paper: 12,9 Coloured glass: 2,5 Clear glass: 1,9 Plastic packaging: 9,9 Metal packaging: 1,9 Paper packaging: 5,1 Corrugated paper: 24,5 Recovered paper: 12,5 Combustible waste: 265,6 Compostable waste: 65,7	0,004 0,001 0,0006 0,003 0,0006 0,002 0,008 0,004 0,090 0,020	Calculated using standard values based on information from Akademiska hus for Ultuna.
	Total annual hazardous waste production, in tonnes.	121,4	0,04	Information from Ragn-Sells
Biodiversity	Land use in built areas (m <sup>2</sup> ).	2 851 829	957	Total campus area
Emissions	CO <sub>2</sub> equivalents. Emissions from business travel and other fuel consumption, and CO <sub>2</sub> from electricity, heating and cooling as well as animals, tonnes of CO <sub>2</sub> equiv.	6 562	2,14	



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SLU operates all over Sweden.  
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