



Environmental report 2018



EMAS

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ENVIRONMENTAL
MANAGEMENT
S-000284

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Environmental report 2018

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Preface

SLU's operations touch on the cornerstones of our existence; our employees and students are important actors in fulfilling Agenda 2030, and we work to face global challenges such as food provision and climate change. Some of our more crucial tasks include researching and teaching prioritisation between production and environmental goals. This means that we have the data needed to make good decisions, to strive to practice what we preach, to do our utmost with the resources at our disposal, and to conduct our work with the smallest possible environmental impact.

SLU is systematically working on environmental issues and has chosen to have its operations certified pursuant to ISO 14001. As of 2016, all of the university's operations have been certified. 2018 saw intense efforts to manage and develop the eleven certificates that SLU holds. We work actively to identify and measure our environmental aspects, to set environmental objectives, follow up on aspects and objectives, and ensure that we achieve what we set out to do.

We have made numerous improvements of all sizes in 2018. The major improvements include SLU's management deciding to strive for climate neutrality by SLU's 50-year anniversary (2027) and the efforts to make this vision a reality began in 2018. All objectives and focus areas are presented in the environmental report, but I want to highlight a few of our 2018 initiatives in particular.

- New environmental objectives have been set in education and environmental analysis
- SLU has adopted 13 of the challenges in the climate protocol
- SLU has played an active part in the Climate efficient plastic procurement project ("Klimat-effektiv plastupphandling")
- We have strengthened our resources regarding chemical safety, as well as hiring a chemicals coordinator

In addition to the decision to strive for climate neutrality, SLU has maintained its new trend since 2018 with a continued reduction in domestic flying, and in 2017 we reached the 2020 objective for overall flying.

I look back at 2018, contented by everything that the university has accomplished in the environmental field, but I also see that we still have a lot of work to do in order to become a climate neutral university by 2027. Let us continue to be active in our environmental efforts.

Onwards!

Maria Knutson Wedel, Vice-Chancellor Swedish University of Agricultural Sciences



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About SLU

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 monitoring and assessment at over thirty locations around the country. The largest campuses are in Umeå, Alnarp, and Uppsala. In 2018 the university had 2,980 full-time equivalents among employees and 3,720 among students.

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

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

SLU also has a university administration with 15 departments, whose 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.”

SLU's 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 university management

decides on improvements that are to be made.

Everyone at the university is involved with the environmental work, and there is currently a total of eleven ISO 14001 certificates within the university’s operations. Each certificate has its own environmental coordinators, representatives, and top management. The Environmental unit coordinates and reports on environmental work at a university-wide level. For example, it proposes general environmental goals, coordinates internal environmental audits, and develops general procedures and guidelines.



CERTIFIERAD
ISO 14001
Ledningssystem för miljö



The 2018 environmental year (performance)

Several new environment projects were launched in 2018, and some environmental objectives were reached. It has also been a year of significant commitment among stakeholders, including students forming a new association, Klimatstudenterna, which is pushing for SLU to halve its flight-related emissions within four years.

In 2017, the Vice-Chancellor confirmed SLU's vision to be climate neutral by 2027. An action plan was produced in connection with the decision, and work on implementing the plan has been prioritised in 2018. One of the vision's focus areas is a fossil-free vehicle fleet. 2018 was the first year that the agricultural work at Lövsta near Uppsala ran its vehicles and farming equipment on fossil-free fuels, HVO. Several of the university's own older vehicles have been sold off and the replacements have mainly been fossil-free.

As was the case in 2017, SLU was ranked second of all Swedish government agencies in the Environmental Protection Agency's follow-up of government agencies' environmental management work.

The previous environmental objectives for education expired in 2017, and new objectives were therefore set for both environmental analysis and education in sustainable development. For the latter, SLU was nominated for the journal Miljö och Utveckling's annual environmental strategy award. Follow-up of all environmental objectives has been published on the environment page (<https://internat.slu.se/en/support-services/administrative-support/environment/environmental-objectives/>)

SLU is annually audited both externally, by the certifying body RISE, and internally, by SLU's own staff. In 2018, RISE found several deviations, of which three were classified as major. All issues in the system have been addressed. In 2018 SLU had around 15 qualified and approved internal auditors. During the year, two students were also recruited and involved as internal auditors.

Over the course of 2018, the research vessel Svea has been constructed in the docks of Vigo, Spain. The Environmental unit has been involved with setting specifications when designing the ship, procuring the shipyard, and is now working on integrating the ship into environmental management activities.

The Environmental unit continues to receive many good proposals for improvements from

employees and students around the country. The proposals are of a wildly different character and scale. Some areas are more prominent than others, including work-related travel (travel guidelines, difficulties booking train tickets abroad, meeting scheduling, too few meeting rooms with video link capabilities etc.), bicycle-promoting measures, plastic and use of disposable materials. We follow up on all the ideas we receive and many of them result in concrete improvement proposals. For example, we have continued our investment in charging posts for electric cars, with a few being installed in Alnarp. In Uppsala, several bike racks have been replaced with more theft-proof models, and several of the bike parking spots have been roofed over.

In 2018, SLU participated in Uppsala's climate protocol work regarding plastic, with special focus on not purchasing unnecessary plastics and deciding which plastic to purchase, if necessary. The certificates VHC and UDS (the Centre for Veterinary Medicine and Animal Science and the University Animal Hospital) have adopted an environmental objective to replace or remove six products, such as by replacing vinyl gloves with nitrile gloves. An online course in plastics and plastic procurement has been produced in collaboration with Uppsala Climate Protocol. The work has also led to our procurements having an increased focus on avoiding unnecessary plastic packaging, where possible.

¹Uppsala climate protocol is a network of companies, public businesses, universities and associations collaborating and inspiring each other and others to achieve Uppsala's stated climate goals, and to contribute to a sustainable world. SLU have been active members for many years.



The Climate Fund

In June 2014, the Vice-Chancellor decided that SLU would introduce a climate fund as a part of its efforts pertaining to the environmental objectives 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 given a surcharge of SEK 120.

In autumn of 2018, funds from the Climate Fund were awarded to 14 projects, in summary:

- purchase of an electric car, installation of charging stations for electric cars and electric compact loaders
- study trip to visit industries/universities/research institutes
- investigate opportunities to reduce the use of disposable materials or choosing products that are better for the climate while still meeting healthcare hygiene requirements

- purchase of electric bicycles, creation of a bike workshop, and organising a “bike fixing week”
- research project: innovative strategy for sustainable and cost-efficient vegetable production systems
- LED lighting in greenhouses
- switching a regular toilet for a urine-diversion flush toilet.



PRME Certification

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.

Sustainability-oriented master's programmes in business administration are offered by the Department of Economics. 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 energy cells, and biofuel boilers.

In 2018, SLU produced a total of 3,140 MWh of electricity and 8,630 MWh of heat. SLU's total consumption in rented and owned premises was 27,550 MWh of electricity and 29,640 MWh of heating/cooling. The degree of self-sufficiency in rented and owned premises was thus 11 % for electricity and 29 % for heating.

The production for 2018 can be broken down as follows:

- biogas plant, electricity: 3,010 MWh
- solar power cells, electricity 125 MWh
- biogas plant, heating: 2,880 MWh
- biofuel boilers, heating: 5,750 MWh



The university's environmental indicators

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 analysis:** 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. Through this environmental analysis, 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 district heating/cooling. In many cases, this causes emissions of, for example, CO₂ and other environmentally hazardous substances.
- **Work-related travel:** we sometimes need to travel as part of our work, and this travel results in emissions of CO₂ and other gases.
- **Purchases:** SLU procures and bids on goods and services for several million SEK 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 numerous vehicles of varying types, powered by different fuels. The use of various types of fuel generates CO₂ emissions, but also emission of other environmentally hazardous substances
- **Farming:** SLU has farming and forestry operations covering around 6,000 hectares, which has both a negative and a positive impact on the environment.
- **Animal units:** SLU owns around 1,000 animal units, which impacts the environment in various ways, both positively and negatively. For example, the cattle produce methane emissions while keeping landscapes open and promoting biodiversity. SLU's animals primarily contribute to research on animal welfare, methane emissions, and much more.
- **Conventional and hazardous waste, as well as electronic waste:** SLU's operations generate different types of waste, which in turn can create emissions during final processing, in Sweden or abroad.
- **Antibiotics:** SLU's animal production and the University Animal Hospital use antibiotics. 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 and other activities use many different types of chemicals. There is a risk of emission into the air or water, and in some cases the ground (field trials).
- **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.

Of the significant environmental aspects, the university has chosen to set environmental objectives for energy consumption, business travel, purchasing, education, and environmental monitoring and assessment. SLU also has a vision of being climate neutral or climate positive by 2027. To achieve this, six focus areas have been identified. All significant environmental aspects receive annual follow ups, including those which SLU has decided not to set objectives for. In addition to SLU's university-wide environmental objectives, many operational areas have their own environmental objectives, including:

- reducing the use of the anaesthetic gas isoflurane at the animal hospital in Uppsala
- recreating and informing on functional living environments for freshwater pearl mussels and brown trout in the Hedströmmen run-off area in Skinnskatteberg
- reducing the proportion of non-recyclable waste at SLU Umeå by 15 % by the end of 2020 compared to 2015.





General environmental objectives and results 2018

SLU has a vision of being climate neutral by 2027, in time for the university's 50th anniversary. To achieve this, six focus areas have been identified with environmental objectives set in each. Environmental objectives have also been set within education and environmental monitoring and assessment, which together with research constitute SLU's core operations.

The UN's climate goals are clear: the global greenhouse gas emissions must be halved by 2050 and be almost gone by 2100. SLU is an environmental authority that wants to practice what it preaches and sees the importance of, managing its own climate emissions in its role as a government agency. The Environmental unit at SLU has investigated the university's CO₂ emissions in order to better manage the university's climate impact. SLU's biggest emission sources are business travel,

district heating/cooling, machinery and other vehicles, as well as animal units. After evaluating the findings of this investigation, SLU's management has decided to work towards being a climate neutral university in time for SLU's 50th anniversary (2027) when compared to the investigation's base year of 2015. This vision will allow SLU to contribute to reaching the goals set in the Paris Climate Agreement and Sweden's national goal of being climate neutral by 2050.

1. Education²

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

1.1 Sustainable development within programmes³

Integrating sustainable development into all programmes (100 %) by 2020.

Results: SLU has 23 programmes which start at a first-cycle level (excluding foundation years). Some are bachelor's programmes, but most are vocational programmes which continue on to second-cycle level after the first three years. The vast majority (90 %) 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 being taught in English. In all 20 master's programmes, sustainability aspects make up a significant part of the programmes' profiles and are included in the programme syllabuses. In a few cases, the programme syllabuses can be made clearer.

1.2 Course evaluation⁴

To have at least 70 % positive responses in course evaluations when asking if sustainability has been integrated into the education no later than 2020.

Results: The average for this course evaluation question in 2018 was 4.1 out of 5 across all SLU courses. This corresponds to 80 %, meaning that the goal has been reached.

1.3 Workshop: education for sustainable development⁵

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

Results: A workshop is planned for 2019 and will be held.



1.4 Continuing professional development: education for sustainable development⁶

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

Results: So far, around 65 % (282 people) have been trained. 15 persons have applied in 2019.

1.5 Alumni: sustainable development in professional roles⁷

At least 70 % of alumni shall, 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-ups are being developed and will most likely be conducted every other year. This question will be included.

2. Environmental analysis

In order to better contribute to society's environmental efforts, SLU has an overall environment goal of having the data generated by SLU's environmental monitoring and assessment be further utilised by the country's decision-makers, authorities, researchers, and general public.



2.1 Metadata concerning environmental analysis data⁸

Within 1.5 years of starting this initiative, or no later than 31/12/2018, the initiative shall have been implemented in operational processes. Information, known as metadata, shall be available on SLU's website with details on what environmental analysis data is available.

Results: The goal has been extended by one year (from 2017 to 2018). By the end of 2018/start of 2019, 50 (66%) operational areas fulfilled this goal. The ambition for all remaining areas to fulfil this requirement by the end of 2018 was not met. Many areas have chosen to prioritise other activities over the course of the year, meaning that there is still work to do in this regard. This will be followed up on as part of the environmental analysis' environmental goal 5.4 for the period of 2019-2020, with a focus on increasing the publication of open data, making data more visible and directly accessible online.

2.2 Environmental data management: quality guide⁹

By the end of 2020, at least 80 % of all operations participating in SLU's quality work shall have provided open data online according to the applicable quality guide for environmental data management.

Results: The goal began to apply on 1 January 2019. The first follow-up date will be the end of 2019/start of 2020.

3. Energy consumption

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



3.1 Electric energy¹⁰ and district heating/cooling¹¹

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

Results: SLU only purchased and consumed fossil-free energy in 2018. The district heating/cooling purchased or consumed by SLU in 2018 was 71 % fossil-free.



3.2 Self-sufficiency¹²

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

Results: The self-sufficiency in rented and owned premises in 2018 was equal to 11 % renewable electrical energy. The self-sufficiency for heating in 2018 was 83 % for SLU's own properties.

⁶SLU's internal Environmental objective 4.4.4

⁹Environmental objective 5.4

⁷Environmental objective 4.4.5

¹⁰Focus area 6.1

⁸Environmental objective 5.3

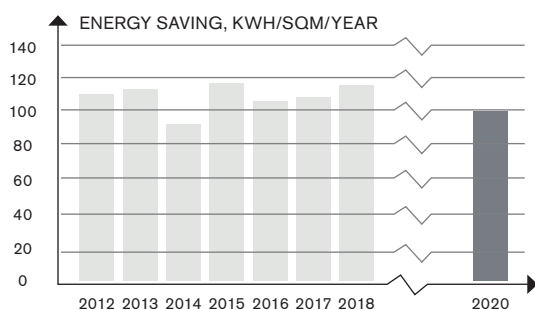
¹¹Focus area 6.2



☹️😊 3.3 Energy savings¹³

SLU shall save at least 1 % of energy per m² and year in its own properties, using 2012 as the base year. In other words, SLU shall have saved at least 9 % energy per m² by 2020.

Results: The 2018 energy consumption had increased by 5 % since 2012 in SLU's own properties. The increase is explained by premises being rented out to a larger extent. If the calculations include SLU's rented premises, we have reached the objective.



4. SLU's own vehicles¹⁴

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 shall be run on non-fossil fuels.

Results: Motor vehicles, machines, and tools owned by SLU can in 2018 be broken down as follows: electric 3 %, hybrid 4 %, diesel 69 %, and petrol 24 %. Of the total diesel consumption, at least 40 % was fossil-free diesel.

5. Purchases

☹️ 5.1 Procurement¹⁵

Procurement of goods and services shall be guided by clear climate awareness.

Results: Largely satisfactory results.

😊 5.2 Environmental requirements in procurements¹⁶

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, shall result in good environmental choices being identified where available. This shall 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 2018, all signed agreements have been subjected to an environmental risk analysis. In nine of these procurements, the environmental risk analysis has resulted in the setting of environmental requirements.

😊 5.3 Follow-up of procurements¹⁷

There shall 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.

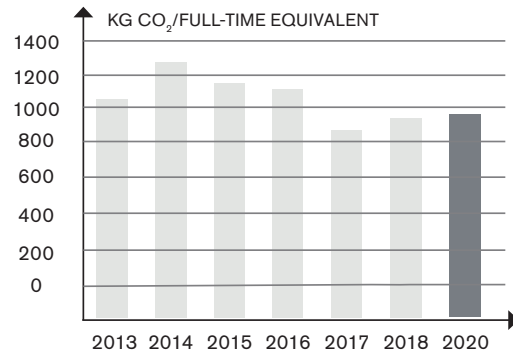
Results: In 2018, three tractor procurements were followed up on.

6. Business travel¹⁸

SLU's operations are spread across the country, along with many international contacts, cooperation forms and research projects, which entails frequent work-related travels. SLU's individual business travel shall be reduced according to an adopted objective formulation and action plan.

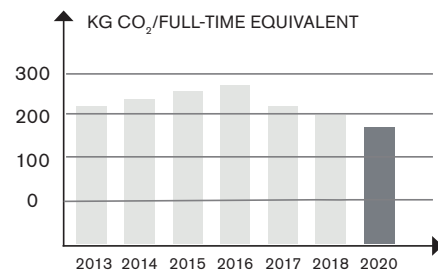
😊 6.1 Total sum for business travel¹⁹

SLU shall reduce the carbon dioxide emissions from travel by at least 10 % per employed full-time equivalent by 2020 compared to 2013.
Results: SLU has reduced its total flights in 2018 by 11 % (CO₂-emission per full-time equivalent) compared to 2013.



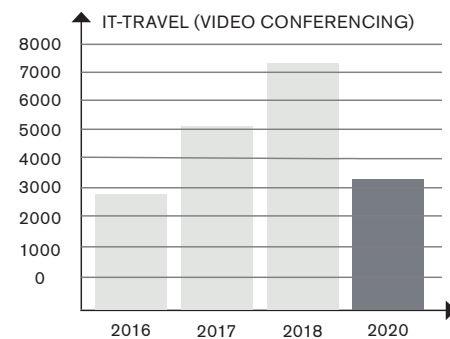
😞 6.2 Domestic business travel²⁰

The carbon dioxide emissions from domestic flights shall be reduced by at least 20 % per employed full-time equivalent by 2020 compared to 2013.
Results: SLU has reduced its domestic flights in 2018 by 9 % per full-time equivalent compared to 2013.



😊 6.3 IT-travel (video conferencing)²¹

IT travel (video conferencing) shall increase by at least 15 % by 2020, compared to 2016.
Results: The number of meetings have increased by 156 % since 2016.



7. Climate compensation²²

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 shall be conducted in 2020.

¹²Environmental objective 1.1

¹⁵Focus area 6.4

¹⁸Focus area 6.5

²¹Environmental objective 2.5

¹³Environmental objective 1.3

¹⁶Environmental objective 3.5

¹⁹Environmental objective 2.1

²²Focus area 6.6

¹⁴Focus area 6.3

¹⁷Environmental objective 3.6

²⁰Environmental objective 2.4

Legislation and other requirements

SLU operates under many laws, regulations, and other requirements when it comes to environmental work. All requirements are included in a list of laws and each year we check to ensure that we have routines and regulations which comply with the relevant laws. Several government agencies 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, bike-friendly workplace, Climate framework for universities, and not least the entirety of the sustainability goals in Agenda 2030.

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 2018 noted improvement potential when it comes to internal waste management.

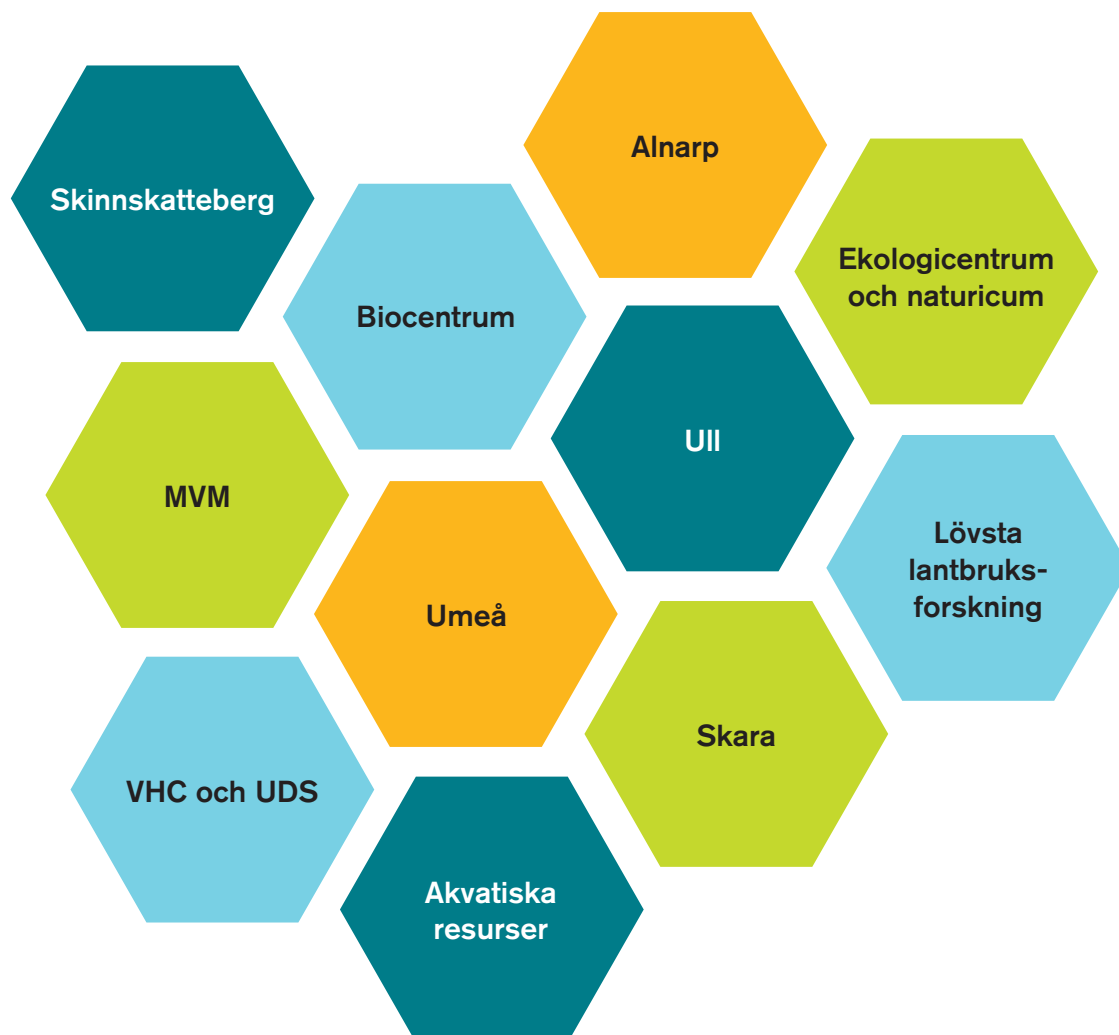


SLU's eleven environmental certificates

In 2009, the Vice-Chancellor decided to have all of SLU ISO 14001 certified. The various operations at SLU between 2003 and 2016 have successively become certified, and as a result SLU currently holds eleven different certificates.

As of 2016, all of the university's operations are certified. The certificates differ in content depending on the location, faculty, house 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 various certificates include local operational

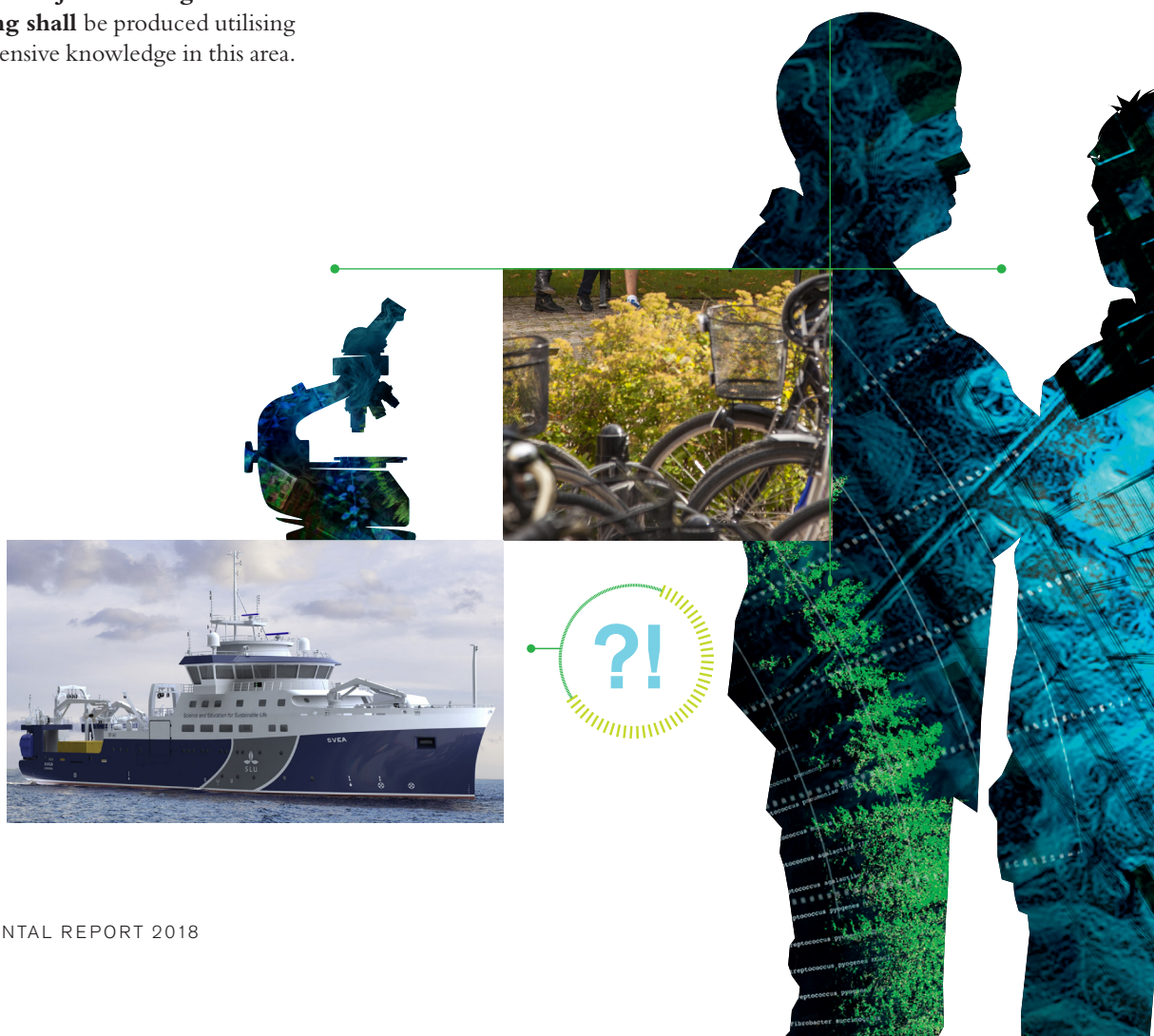
routines and environmental objectives. The Vice-Chancellor has the ultimate responsibility for SLU's environmental work. The university management and Vice-Chancellor are included in Ull's certificate, where the general environmental objectives and joint guidelines that apply to all of SLU are drawn up.



What happens in the coming period?

Looking ahead, we can see major challenges for SLU in the environmental field. Below are a number of points that will be important to the university in the coming period:

- **New environmental objectives in business travel, meeting and travel guidelines, and travel reimbursement.** The period set to achieve the travel objectives will soon expire and new objectives must be drawn up, while guidelines for meetings and travel reimbursement are reviewed.
- **New environmental objectives for purchasing.** The period set to achieve the purchasing goals will soon expire and new objectives must be drawn up.
- **Environmental objectives or guidelines in food / catering shall** 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 a climate neutral university by 2027.
- **Svea** SLU's new research vessel will soon be completed and will be integrated into our environmental management system.
- **One certificate-** SLU's eleven certificates will be combined into one.



The Environmental unit at SLU

SLU's environmental report has been produced by employees at the Environmental unit, Johanna Sennmark, Karin Bäckman and Kristin Thored project managed by Agneta Höjdestrand.



You can find more information about SLU's environmental work at >> <https://internt.slu.se/en/support-services/administrative-support/environment/>
You can contact the Environmental unit at miljo@slu.se



Johanna Sennmark,
Environmental Manager



Camilla Källman,
Environmental Coordinator



Karin Bäckman,
Environmental Coordinator



Maria Naucclér,
Chemicals Coordinator



Mats Svensson,
Deputy Environmental Manager spring 2018



Torbjörn Alwehammar,
Internal Environmental Audit Coordinator

Appendix 1

Core indicators

In the environmental report, the organisations shall provide core indicator numbers 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, 2,980)
- Number R, signifying the A/B ratio.

Area	Core indicator	A	R	Comment
Energy efficiency	Total annual energy consumption, MWh (a).	57,194 MWh	19,2	
	Percentage of a that is from renewable energy sources produced by the organisation (b).	20,6 %		
Material efficiency				Not reported. SLU is a service company and thus has no material flows of significant environmental importance.
Water	Total annual water consumption, m ³ .	197 460 m ³	66,3	
Waste	Total annual waste production, excluding hazardous waste, in tonnes.	Misc paper: 22,6 Coloured glass: 3,1 Clear glass: 2,2 Plastic packaging: 7,6 Metal: 2,4 Paper packaging: 4,1 Cardboard: 31,1 Combustible waste: 171,3 Compostable waste: 44,6	0,008 0,001 0,0007 0,003 0,0008 0,001 0,010 0,06 0,02	Calculated using standard values based on information from Akademiska hus for Ultuna.
	Total annual hazardous waste production, in tonnes.	95.4 tonnes	0,03	Information from Ragn-Sells
Biodiversity	Land use in built-up areas (m ²).	2 851 829	957	Total campus area
Emissions	CO ₂ equivalents. Emissions from work-related travel and other fuel consumption, and CO ₂ from electricity, heating and cooling, and animals, tonnes of CO ₂ equiv.	7 149	2,39	



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