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Survey and Assessment of Environmental Aspects at Stockholm University 2010

Summary and proposal for continued environmental management

Between October and December 2010, the University performed a survey and assessment of direct and indirect environmental impact in order to identify the significant environmental aspects of operations. This work was part of the process to environmentally certify Stockholm University according to ISO 14001 and EMAS.

The work was begun by having all departments identify activities with negative and positive environmental impact within University operations. The University's environmental aspects were derived from this survey. Thereafter, the environmental impact of each environmental aspect and its quantity/scope were assessed. Those given a score of 5 or above in the assessment are the University's significant environmental aspects.

Stockholm University's significant environmental aspects are listed on the following table. Significant environmental aspects have both indirect positive environmental impact and direct negative environmental impact.

Significant Environmental Aspects	Quantity/ Scope	Environmental Impact	Total
Research, education and community partnership	5	3	8
Use of office machines	3	4	7
Energy use	3	4	7
Travel and transport	2	5	7
Use of materials in office operations	3	3	6
Purchasing and procurement	3	3	6
Employee skills development	2	4	6
Use of materials in laboratory operations	2	3	5
Discharges to water	2	3	5
Use of chemicals	2	3	5
Waste management	2	3	5

What the University needs to do in future environmental management is to prioritise the significant environmental aspects. Consequently, the environmental management programme will not encompass all significant environmental aspects in the first phase and the work will be performed successively. However, it is important that the University works actively and strategically with its environmental impact and strives to achieve continuous improvements.

Research, education and community partnership

In order to increase indirect positive environmental impact within research, education and community partnership, the University can more clearly communicate what is being done and how the University is working with environmental protection and sustainable development. As an example, this can be accomplished by more clearly integrating sustainability in communication strategies.

Other initiatives to further highlight the aspect may include establishing relevant key figures for research and education in environmental protection and sustainable development and suggesting learning objectives for sustainable development and how these should be included in courses at the undergraduate, graduate and postgraduate levels.

Employee skills development

The purpose of the environmental aspect *Employee skills development* is to create awareness and knowledge about how our work impacts the environment. This can be done by providing regular training and arranging seminars and campaigns linked to the significant environmental aspects.

Purchasing and procurement

Purchasing and procurement have indirect positive environmental impact through setting environmental criteria. While environmental criteria are already imposed within the University, the extent to which this occurs is unknown. This information is essential to providing feedback to employees and achieving improvements and reporting the percentage of environmental criteria and the economic value of environmental criteria as required by the Swedish Government Ordinance on Environmental Management in Government Authorities.

Since most of the University's procurements are carried out at the central level, the departments have little opportunity to influence whether procurement criteria include environmental considerations. However, the departments can make green choices when purchasing office supplies or office machines, for example. It is thus important that environmentally adapted goods and services are clearly identified to make this easier for buyers.

It is also important that units which carry out procurements have effective procedures in place to ensure that environmental criteria are imposed and that contracted resellers/service providers offer a wide range of environmentally adapted goods/services. This applies in particular to goods that the University purchases in large quantities and to frequently used services.

Also significant are effective follow-up systems that facilitate reporting of the percentage of environmental criteria and the economic value of environmental criteria in connection with procurement and purchasing, and create the prerequisites for providing feedback to employees and tracking developments in this area.

Waste management

The University has an effective recycling system and the departments sort waste for recycling to varying extents. In order to reduce the environmental impact of waste, the amount of waste generated must decline and recycling must increase.

The amount of waste sorted for recycling can be increased by making the recycling system more accessible to employees, students and visitors to the University. This can be accomplished by placing recycling containers in the common areas and possibly increasing the number of central recycling stations. Continual information and training is also important so that employees become more familiar with the University's waste management procedures. The visibility of information showing where recycling stations are located on the campus can be improved and signs can be adapted to the recycling system.

The amount of waste can primarily be affected by setting requirements for packaging materials in connection with purchasing and procurement.

Wishes have been expressed for household waste to be included in the University's recycling programme and thus also to create an opportunity to collect waste at the departments. Training in waste management, including chemical residues, has also been requested.

Energy use

The University's energy use has negative environmental impact that can be reduced by more energy efficient operations. Electricity use is the area in which the University has the greatest opportunity to make a difference. Here, the introduction of procedures for reducing environmental impact related to the use of office machines and electrical equipment is significant.

Although many departments have good procedures for efficient use of electricity, such as shutting off office machines and turning off the lights at the end of the working day, this does not apply to all energy use. This is partly due to that strategies for updating software and running backups on computers vary among the departments. For example, computers in some departments are left on at night so that these services can be performed.

Continual review of procedures for IT system administration and operation is a key component of the effort to achieve more efficient use of electricity. This includes buying low-energy office machines. Instructions for saving energy can also be improved. For instance, users of IT and Media workstations are unsure about whether computers may be shut down.

Review of procedures in connection with use of electrical equipment in laboratory operations, such as handling of fume cupboards, is another important aspect of improving energy efficiency.

Training in 'Green IT' and low-energy office operations, for example, is also highly significant to creating better understanding and awareness of these issues.

It is more difficult for the University to implement its own energy saving measures for heating and ventilation, but Stockholm University could establish a partnership with property owners related to use of the properties and energy saving measures, as well as financial incentives for energy savings.

Use of office machines

The use of office machines is widespread within the University, which entails heavy use of electricity and generation of large quantities of hazardous waste. Strategic efforts to identify energy-efficient solutions for operating IT systems are key to reducing this environmental impact. It is also important that office machines are low-energy and contain minimal quantities of environmentally hazardous substances.

Departmental procedures for using office machines are also highly significant, such as using computer power save features and shutting off machines at the end of the working day.

Increasing the lifetime of IT products is another way to reduce the environmental impact of machines. This can be accomplished by re-using computers or utilising computer components. Re-using computers and utilising computer components reduces the use of natural resources and the quantity of electronic waste.

Travel and transports

Business travel is frequent because meetings and networking are such vital aspects of the work of Stockholm University. Business trips by air and passenger car have significant negative environmental impact. The choice of means of transport is usually governed by time and cost.

The general travel policy for Stockholm University is that employees should consider whether a trip can be substituted with a videoconference or web meeting, avoid flying for distances of less than 500 km and select eco-friendly 'green' taxis.

Future work to reduce environmental impact related to business travel may include making the travel policy more stringent with a view to limiting the number of domestic flights to destinations where there are good rail connections, for instance.

Training in virtual communications - videoconferencing and web meetings - should be arranged as part of the University's environmental management programme. It is also important to give employees feedback about the negative environmental impact of the University's business travel.

With regard to travel to and from work, employees can be encouraged to use public transport, cycle, or walk. This could be accomplished, for instance, by arranging campaigns to promote cycling and walking with links to the health aspect.

The University has limited opportunity to implement measures to reduce the environmental impact of goods transports. In connection with procurements, requirements can be set regarding the delivery vehicle's environmental class, but only when goods transport is part of the service or if the contracted reseller also arranges transport. Requirements can also be set for ECO-driving. With respect to the University's own goods transports, environmental impact can be reduced by using eco-classed vehicles, coordinating transports and ECO-driving.

Use of materials in office and laboratory operations

The environmental impact of use of materials can be limited through thrifty consumption. With regard to laboratory operations, this primarily involves the use of disposable materials made of plastic, and for office operations, the use of copy paper, other office paper and printed paper products. Environmental impact can also be limited by setting environmental criteria in connection with procurements and taking environmental aspects into consideration in connection with purchasing.

One possible action to limit the use of materials would be to digitalise the University's course catalogue and reduce the printed edition. This has been done by other institutions, such as Dalarna University and Gotland University, which have reduced the printed edition by having the course catalogue available on their websites as a PDF. Applicants can also create a personalised catalogue with the selection they are interested in and receive it as a PDF. The entire course catalogue and the personalised catalogue are also available in printed format. The printed course catalogue is used primarily by guidance counsellors as working material.

Use of chemicals and discharges to drains

The use of chemicals and discharge of chemicals to drains occurs primarily in laboratory operations. Improvement measures can be implemented by having the departments review options to replace chemicals with other equivalent chemicals that are better alternatives for the environment and to reduce the use of chemicals. The departments could also review opportunities to restrict the dilution of chemical residues in drains.

It would also be desirable to prepare common guidelines with a view to limiting environmental impact that arises in connection with the use of chemicals.