



European
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EMAS and the education sector

Case Study



Environment

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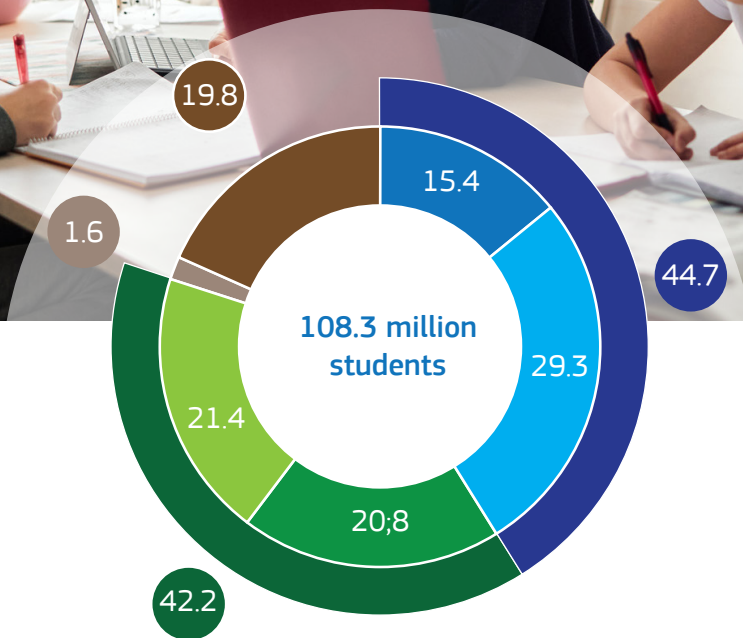
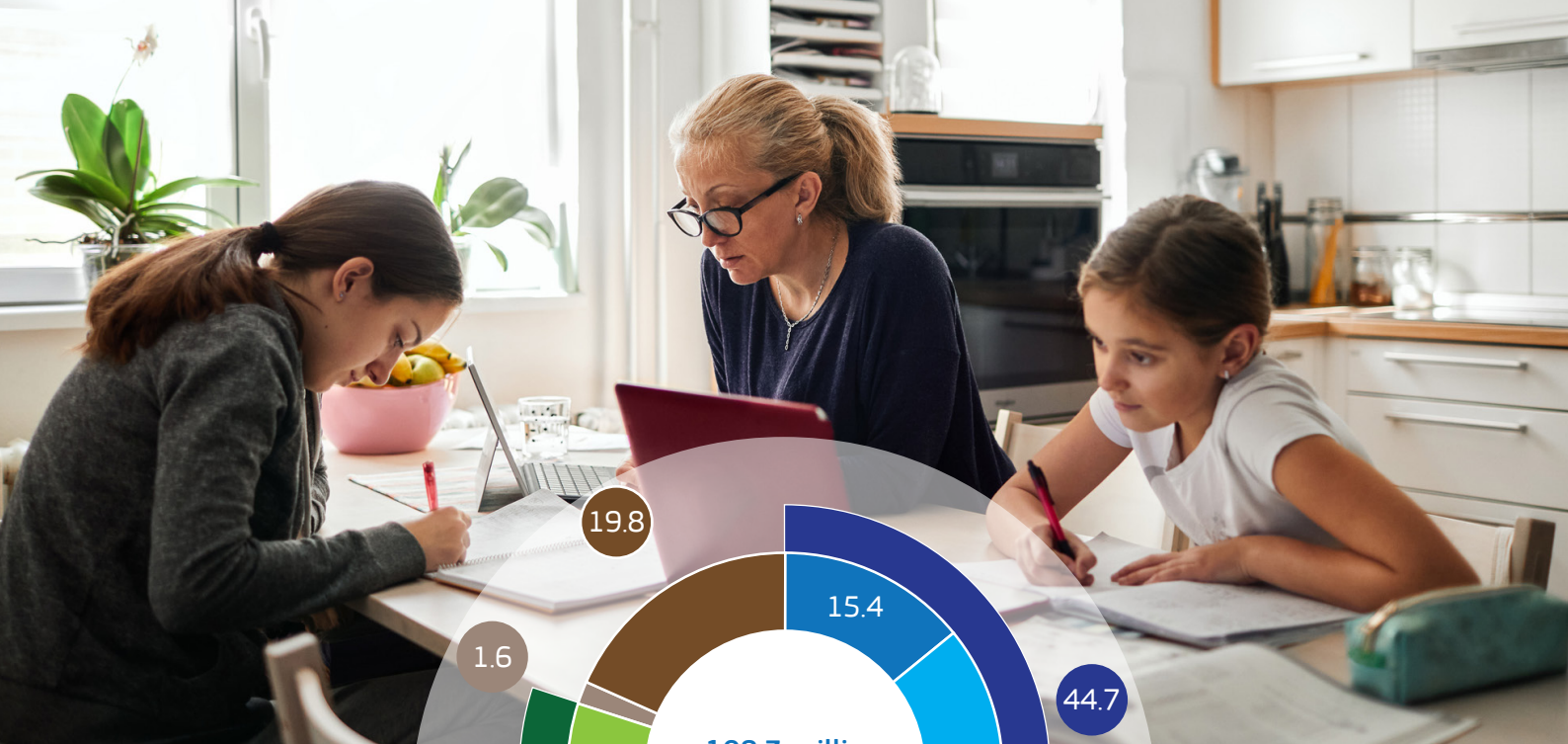
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RELEVANCE OF THE EDUCATION SECTOR IN RELATION TO ENVIRONMENTAL POLICIES

The education sector plays a vital role in an economic, social and environmental context since it has the capacity to transform society and prepare it to adapt to needs and challenges from different perspectives. It is a complex activity that accompanies the various stages of personal development and therefore it is an articulated sector that adapts itself in terms of content, format, spaces, context, etc.

In 2017, there were 108,3 million students training in both public and private centres in the EU-28.

44.7 million pupils were enrolled in primary education (15,4 and 29,3 in pre-primary and primary school respectively), while secondary school counted on **42.2** million (20.8 million in lower secondary education and 21.4 million in upper secondary education). Post-secondary non-tertiary education was by far the smallest group with **1.6** million pupils in the EU-28 in 2017 and lastly, tertiary education students accounted **19.8** million.¹

Regardless of the age of the population education and training centres are targeting, they can have an enormous influence on people's behaviour and this can generate a positive environmental impact if these centres prepare people to be environmentally responsible citizens. Moreover, professional training centres and the last years of the education cycle, also represent the transition from education to work, therefore, people who acquire environmental knowledge and skills at this stage will also be better prepared to contribute to solving or helping with environmental challenges in their future jobs. Lastly, if we consider that in 2017, across the EU-28, more than one fifth (22.2 %) of all students in tertiary education were studying business, administration or law², this provides with an idea of the potential impact environmental management in the education sector could have in future organizations' managers and entrepreneurs.

Taking into account the importance of the environment in all aspects of human life, we should consider how environmental issues should be a transversal discipline to all types of studies.

¹ Source: "Education and training in the EU - facts and figures", EUROSTAT

² Source: "Tertiary education statistics" - EUROSTAT

THE EDUCATION SECTOR AND ENVIRONMENTAL MANAGEMENT

From an environmental point of view, education and training centres, like many other activities, generate various impacts on the environment related to their activities and the management of the different sort of premises they build or occupy (offices, classrooms, laboratories, canteens and cafeterias, etc.). In fact, they consume resources (such as energy, water and other materials), they generate waste and air emissions both for the operation of their facilities and due to the daily mobility of all the people involved. Besides these environmental aspects, without any doubt, the education sector has a huge influence related to the potentially positive or negative impact caused by future generations. When an education centre adopts environmental management practices in a systematic way, for example within the framework of the EU eco-management and audit scheme (EMAS), it can sensitize many people to start with staff, students, providers - these in turn, can also be precursors of change in their families and their own context. This undoubtedly constitutes a large-scale investment for the future!

This also leads us to the UN's [Sustainable Development Goals](#) (SDGs), specifically to objective n. 4 "Quality Education". As recalled by UN, obtaining a quality education is the foundation

to improving people's lives and sustainable development and therefore, the education sector has a central role with the achievement of this SDG which also has a transversal impact on the rest of SDGs.



EMAS can be an excellent tool to integrate the SDGs in the day by day life of the educational institutions. Its systematic approach ensures that actions linked to the SDGs are not isolated, but framed within a broader vision and reporting on achievements can be easily integrated also in the environmental statement. More information is available [here](#).

The growing international movement "Fridays For Future" and the "Greta phenomenon" are also a signal of how society is changing and the mobilization capacity of young people. It is clear, therefore, that the education sector must also adapt to the new demands and concerns of one of its stakeholders and adopt tools to provide adequate responses. In this sense, EMAS, thanks to its emphasis on dialogue, transparency and understanding of the needs and expectations of interested parties, is surely the tool that can offer greater confidence.



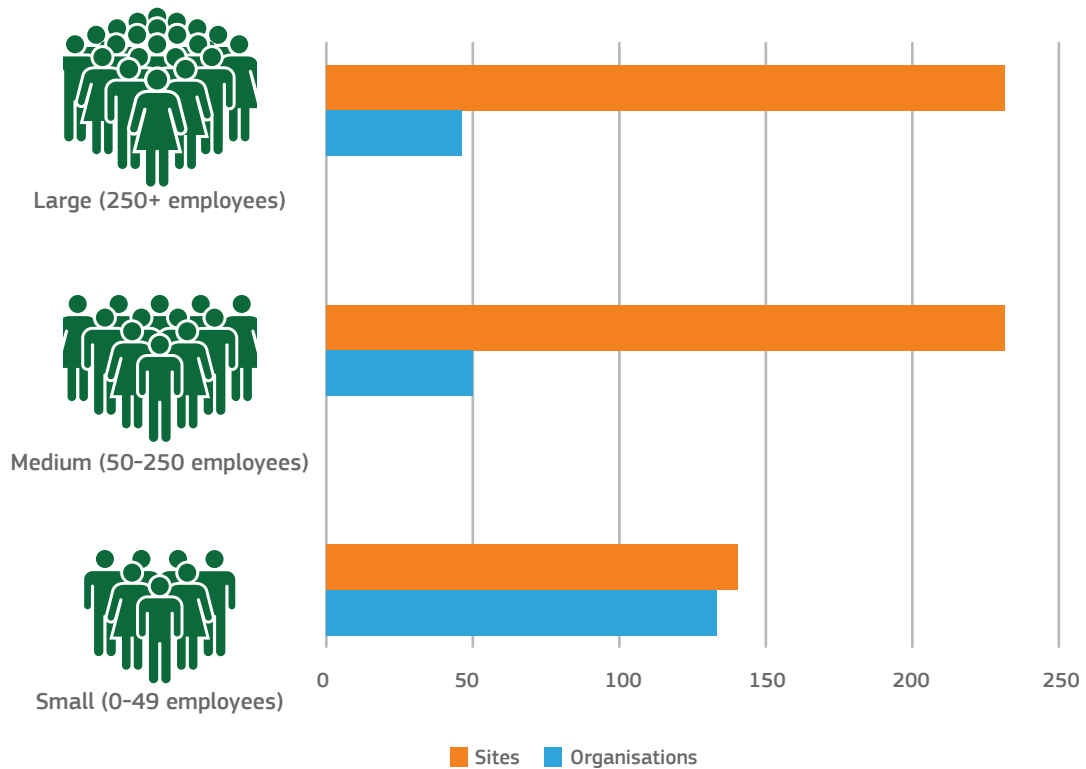
According to the EU register of EMAS-registered organisations³, **231 European organisations have implemented EMAS in the education sector**⁴. These **448 EMAS registered** sites account for 101.130 employees. 134 of these organizations have less than 49 workers, 50 are medium organisations and the other 47 have a really large workforce, comparable to that of some large corporations, indeed, 25 of these large organisations have more than 1.000 employees.

With regards to the geographical distribution, Germany represents 59% of EMAS registered organisations in the education sector (137 organizations), followed by Spain (25%) and Austria (10%) with 57 and 23 EMAS registered organisations respectively. Although with a smaller presence, other EU countries also have EMAS registered organisations, such as Italy, Sweden, Belgium, Cyprus, Greece, Luxembourg and Poland.

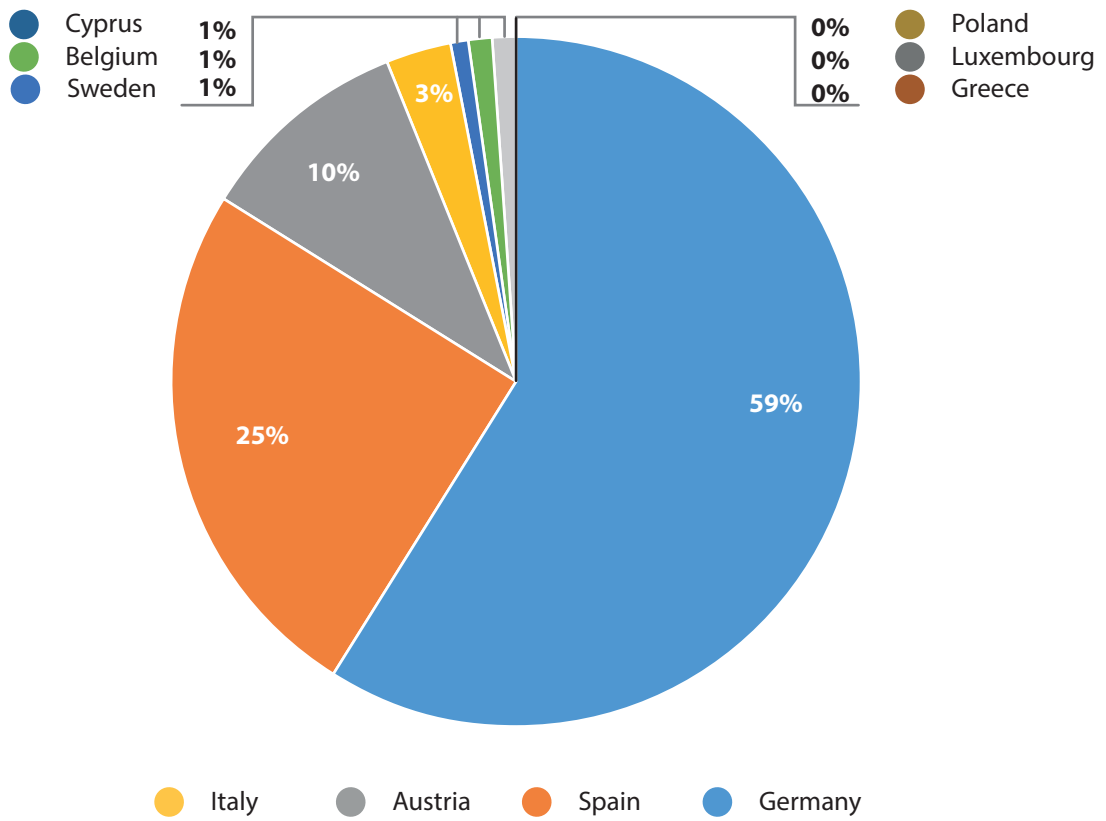
³ EU Register, as of December 2020: http://ec.europa.eu/environment/emas/emas_registrations/register_en.htm

⁴ Including Universities, schools and other organisations from the education sector.

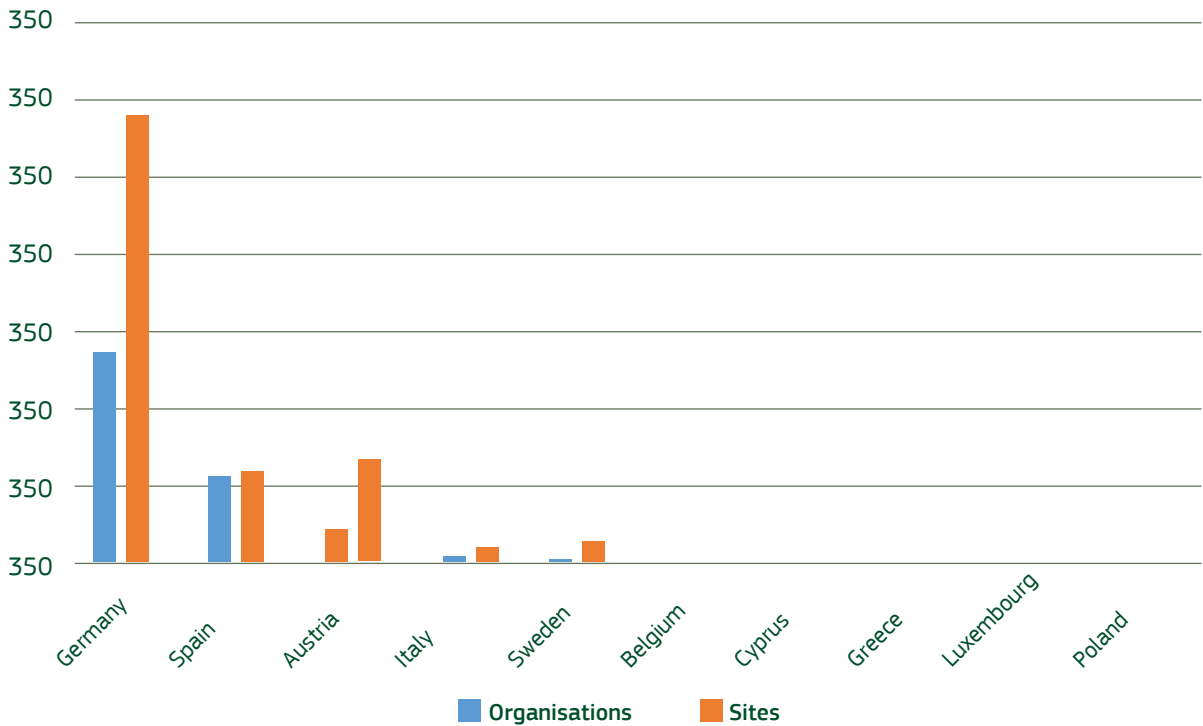
Number of EMAS registered organisations and sites by size



Percentage of EMAS registered organizations per EU Member States



Number of EMAS registered organisations and sites in the education sector per EU Member States



Find more specific information regarding EMAS in higher education organisations in the following [link](#) and learn how their efforts have been recognised within the EU EMAS Awards.

EXPERIENCE OF ORGANISATIONS IN THE EDUCATION SECTOR

The following three organisations provide us their view on how EMAS contributes to their business from different perspectives.

The Eberswalde campus has been committed to sustainable research and teaching for over 180 years: The [University of Applied Sciences for Sustainable Development Eberswalde \(HNEE\)](#) was founded in 1830 as the Forestry Academy. Since the traditional forestry and timber research campus near Berlin reopened its doors in 1992, the university has focused on forward-looking industries and key sectors such as renewable energy, regional management, sustainable tourism, conservation, forestry, organic farming, adaptation to climate change or sustainable economics. The university has a staff of about 250 people and houses 2.100 students a year.

HNEE started the EMAS implementation process in 2009 and the following year obtained the EMAS registration, this was also the same year that it obtained its first EU EMAS award, a fact that would be repeated in 2017.

According to Mr. Henning Golüke, Responsible of Climate Protection Management, *“for a university focused on studies on sustainable development, adopting EMAS was part of the very essence of the university. This scheme was chosen for its rigor and for the commitment to transparency it implies. Having an environmental declaration validated by a third party offers guarantees that there is a real commitment and that it is not a matter of green washing, it definitely increases our credibility”*.

HNEE has carried out various actions to improve its environmental performance. Regarding energy, on the one hand, it has solar panels in some buildings and, on the other, the contracted energy comes, since 2012, from sources certified as 100% renewable. Moreover, heat demand is covered with renewable wood from nearby



The pictures show our 2 campus: forest campus and StaCa = city Campus. Copyright: © HNEE/Patrick Pleul

forests and some cars from the university's fleet are fueled with gas generated from secondary resources (waste).

Since 2013 it has an EMAS-based climate protection plan from which various projects have originated.

In terms of mobility, HNEE has developed, in collaboration with the public transport companies, a special commuter's ticket for students. In order to reduce the related climate impact, they purchase the additional green electricity, which is mathematically needed for the transport of the students to the university.

Moreover, the HNEE runs in collaboration with a local car sharing project a full electric vehicle that can be shared with other users in the region.

As Mr. Golüke underlines *“beyond the impact that various actions may have within the university itself, many of them have the power to transcend the physical limits of the university and positively influence other people and organizations”*. In this sense, actions related to green purchasing are crucial since they induce suppliers to have a better environmental behavior and other actions such as collaboration with external parties can contribute to improve quality of life for the community. The latter is the case of the collaboration with Ivakale (a NGO run by alumni) whereby the site’s unavoidable greenhouse gas emissions are offset by a project in Kenya for the propagation of clay stoves based on local technology that contribute to save firewood.

Involving stakeholders is a key issue. In this regard, HNEE organises once a year a climate protection week and has also created a “Round Table on Sustainable Development” which meets once or twice per semester and where staff, teachers and students are invited to participate. The round table generates several working groups focused on specific issues, currently there’s one on food/cafeteria management, on the HNEE’s sustainability principles, and about social aspects of sustainability.

Thanks to the inputs of the working group on sustainable cafeterias – which has a lot of participants – it has been possible to implement city-wide system for reusable coffee-to-go cups. This has helped to reduce the use of disposable cups by at least 25.000 per year, greenhouse gas emissions by 750 kg CO₂eq and 350 kg of waste alone at the HNEE.

From the perspective on an education institution, **reaching other people is the best environmental achievement**. In this sense, an important milestone has been the fact that the



university’s department of economics has been adapting and has ended up being the current department of sustainable economy, thus offering enormous added value for future professionals. As Mr. Golüke stated, “in recent years we have seen how the main interest of most economics students has been expanding and integrating with sustainability competencies. This is also reflected in life on campus and in the participation of these students in the sustainability working groups”.

Kiel University (CAU) was founded back in 1665. It is Schleswig-Holstein’s oldest, largest and best-known university. After energy consumption rose rapidly for years, it started structuring the environmental management system in 2011 and it got EMAS registration in 2012. Kiel University has chosen EMAS because it’s considered the most demanding system, and the organisation wanted to set a good example and show the public that it takes environment seriously. Furthermore, the university assessed positively that EMAS is a European System and guarantees a comparability among organisations in a similar context. Anyway, as EMAS covers all ISO 14001 requirement, the University is also ISO 14001 certified.

At Kiel University many actions have been implemented in order to improve its environmental performance. In the last five years, it has been reducing the electricity consumption about 6 percent in total and the heating consumption could be kept on a low level. Improvements



in energy consumption and purchasing green electricity brought a significant reduction of the related CO₂ emissions (60 percent).

While the amount of waste has also decreased about 10 percent, the amount of hazardous waste has remained practically unchanged.

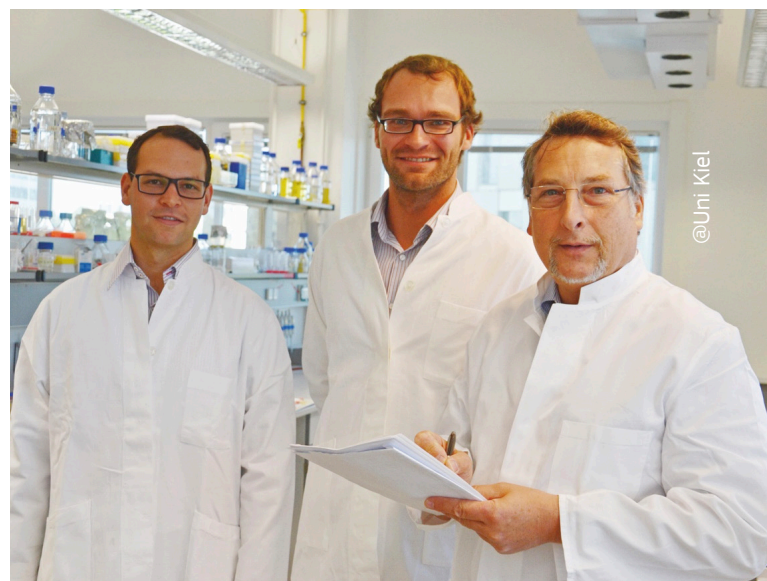
In certain cases, the environmental performance is not the expected or desired and, in this case, the added value of a robust environmental monitoring system is that it detects and alerts organisations about that specific negative performance, and thus it provides the opportunity of a quicker reaction.

As Mr. Sebastian Starzynski, Coordinator for the environmental management at Kiel University explains, *“Universities can and should have an impact on the students’ community. At Kiel University, this is done through different ways, for example thanks to the interaction with the official student representation, by hiring student assistants to organize events and information stands on sustainability issues and sometimes by supporting student initiatives with financial and/ or technical advice. Soon we will also create a “green office” that will contribute further to this task.”*

Kiel University is a big and articulated organisation with 27,000 students and around 3,700 members of staff, involved in the administration unit and various independent research departments. EMAS has offered the necessary structure to handle big issues such as climate protection in such a big organisation. Mr. Sebastian Starzynski, declares that *“this has been possible, as EMAS requires a great involvement of top management in setting goals and a plan to reach them and this positions environmental issues at a strategic level while, at the same time, it also provides the framework for managing operational aspects linked for example with our facilities and operational processes”*.

Kiel University wants to become climate neutral by 2030. The future challenge at Kiel University is to enhance the scope of CO₂ emissions calculation, particularly those related to its operational processes.

In some EU members states, EMAS can also be an added value when applying to specific funding programs. In the case of Kiel University, it has benefited from specific climate protection funds in Germany.





The [business.academy.donaustadt](https://www.business.academy.donaustadt.at/) is a Secondary College for Business Administration located in Vienna and characterised by its modern building and innovative teaching methods.

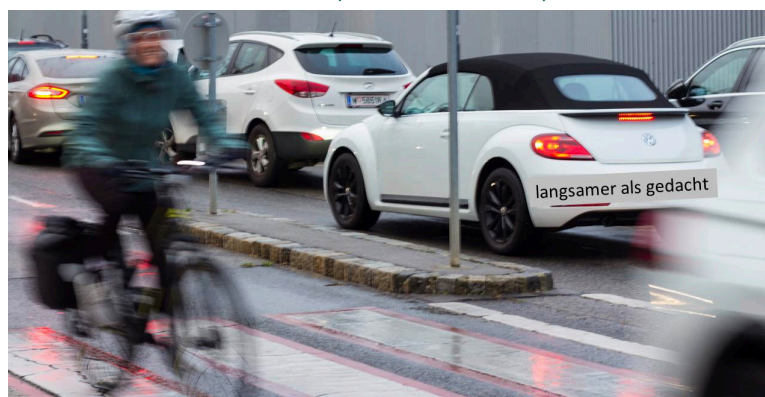
It became EMAS registered in 2001 thanks to a pilot project for the education sector in Austria. The idea came from the students during a class on environmental management and it became the subject of a thesis presented by a team of the students. A year later, the Academy also obtained the “Umweltzeichen”, the Austrian ecolabel, and it is also a member of Ökolog, Austrian networks for sustainability, followed by other social-ecologic memberships like UNESCO-Schools and Healthy Schools (Austrian Label).

Environmental management is integrated in the curricula, as Mrs. Susanne Hrzina, teacher and EMAS EMS-Commissioner, explains “*Environmental Management is an official subject that can be chosen by students from the 5th until the 10th semester, it includes an oral exam and one of the topics is EMAS/ISO 14001. Since 2014/15 we also have had a focus group named HAK experience, where students from the 1st semester can analyse alternative economic systems, based on the Economy for the Common Good, an economic model that aims to benefit all stakeholders. This focus group has a strong social and ecologic alignment. Immersed in this context, the students follow the regular curriculum up to the High School Certificate.*”

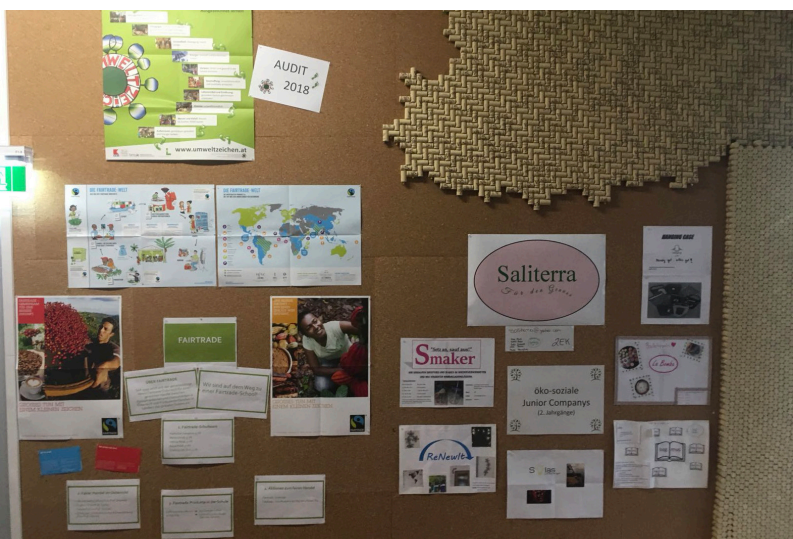
Each year the Business School has different environmental management activities to involve students such as writing a thesis and doing other studies with ecologically oriented topics, volunteering activities, the preparation of waste management concepts for other schools and green events, works on the ecological footprint of the school, on the CO₂ impact of the language journeys by plane, and so on. Moreover, all students take part in the competition “Separate it”. Each class has two waste managers who take the organic and paper waste of their classes to the collection point weekly. There, they get points for the exact separation of their waste. Students also collect PET bottles - that have been reduced by 35% in the last school year (2018/2019) - and residual waste. This year the school will have eleven candidates for the Waste Inspection review (only students of the subject Environmental Management) and a year-long study of practices in companies of the waste sector and the AWG (Waste Management Act in Austria).



© Sofie Kranewitter – Text in the picture: “Dirtier than promised”



© Sofie Kranewitter – Text in the picture: “Slower than expected”



Wall decoration made out of wine-corks where students illustrate different environmental topics along the year.
Source: business.academy.donaustadt

The variety of activities and campaigns changes accordingly to different needs and interest of stakeholders, and besides environmental issues, they can also include other social aspects, such as the study on “How to get a fair-trade school”. Actually, a future challenge for the school is to raise awareness of the SDGs and all the global connections within the SDGs.

As Mrs. Hrzina recalls, the business.academy.donaustadt has a clear idea of its stakeholders

and the importance of involving them, with this regard, the school is conscious about the impact it can have when the students carry an acquired environmentally friendly attitude into their private and working lives and thus leading to sustainable actions in relevant situations. Some students have shown great initiative, for instance, a group created an awareness photo campaign about a critical view on the use of vehicles, others were active at “Fridays for Future”, and others made an installation with PET bottles to raise awareness of its consumption. Still, even though the students are active, the school wishes the parents would be more involved in the future.

As Mrs. Hrzina declares, *“prevention and conservation of resources is an important issue for us. Circular economy should be a natural component in the life of our school’s graduates, that’s why we also support the creation of “junior Companies” based on environmentally friendly and circular products and services (for example the production of ecological soaps, lamps, juices...)”*.

With regards to the providers, the business.academy.donaustadt, aware of what it means to be an EMAS organization, integrates EMAS in the tenders knowing that this will mean working with a responsible and transparent supplier and reducing risks.

© Sofie Kranewitter – Text in the picture: “one week”



BENEFITS OF EMAS FOR THE EDUCATION SECTOR

EMAS offers various benefits for organisations operating in the education sector. It specifically:

- ➔ Provides a better knowledge -and anticipation- of the environmental context as it prepares the organisation to meet new challenges and societal needs
- ➔ Contributes to cost reduction
- ➔ Optimizes the use of resources
- ➔ Supports a stakeholder's management framework
- ➔ Provides the opportunity to concrete involvement of students, employees and families (for examples the creation of eco-teams, surveys and opinion polls, gamification activities, enrolment in environmental projects/initiatives, etc.)
- ➔ Ensures legal compliance with environmental legislation and early detection of any non-conformances
- ➔ Facilitates innovation at different levels (i.a. premises, operating procedures, curricula, areas of expertise)
- ➔ Improves the working environment
- ➔ Facilitates organisations willing to consider also social actions to integrate them under a common tool and have a systematic approach to sustainability.

INITIATIVES AND SYNERGIES FOR CONTINUOUS IMPROVEMENT

Regardless of the type of educational institution, these organisations need to evolve and adapt in order to prepare future generations to the changing environment and societal concerns. Working within a systematic approach like EMAS provides the education sector with the necessary tools to get prepared, innovate and have a real positive impact on society. Let us think not only about the evident importance of environmental management in science and research, but also its potential influence in all kinds of disciplines and studies (communication and marketing, business management, sociology, etc.). Thus, preparing future generations can be done through innovating and modifying its own premises and operating procedures, as well as adapting the educational curricula, integrating or developing new competencies, professional profiles, etc.

With regards to the premises and operating procedures, educational institutions can get inspired by the Best Environmental Management Practices (BEMPs). BEMPs provide specific guidance based on actions and techniques that have

been implemented by pioneering organisations and proven successful. Even if the EC has not yet developed specific BEMPs for the education sector, this type of organisations can identify potential opportunities for improvement within the BEMPs published for public administrations, several of which are aimed at reducing the environmental impact of office activities. The mentioned BEMPs can be accessed at the Green Best Practice Community⁵, an interactive online tool presenting updated information and allowing stakeholders to interact.

For more information and ideas, you can also have a look at the "[Greening the campus with EMAS](#)" publication.

⁵ The Joint Research Center of the European Commission develops and runs the Green Best Practice Community, moderates the contributions of stakeholders, leads the process of validation of the best practices by the members of the Technical Working Groups, performs the quality checks, approves and publishes all the content of the knowledge base. <https://greenbestpractice.jrc.ec.europa.eu/>

Furthermore, many European and state or regional level environmental campaigns can bring new ideas and a good way to start improvements, since it is often easier to adhere to a campaign than to have to face its organization and cost individually. Another source of information are EU projects, since results and lessons learnt are shared. As an example on energy efficiency, have a look at “50/50 European Network of Education Centres” ([EURONET50/50](#)).

Another way to innovate and improve environmental performance is to participate

in specific working groups, for example interuniversity or interschools working groups, or other environmental sectoral platforms, existing EMAS Clubs, workshops and other meetings organised by EMAS Competent Bodies, and so on.

Last but not least, interaction and networking with other interested parties such as students, NGOs or neighbourhood associations can offer organisations alternative perspectives and serve as a source for future actions and improvements, and even generate synergies and projects with these stakeholders.

For more information on EMAS, the registration process and its benefits,
please visit the EMAS website: emas.eu

