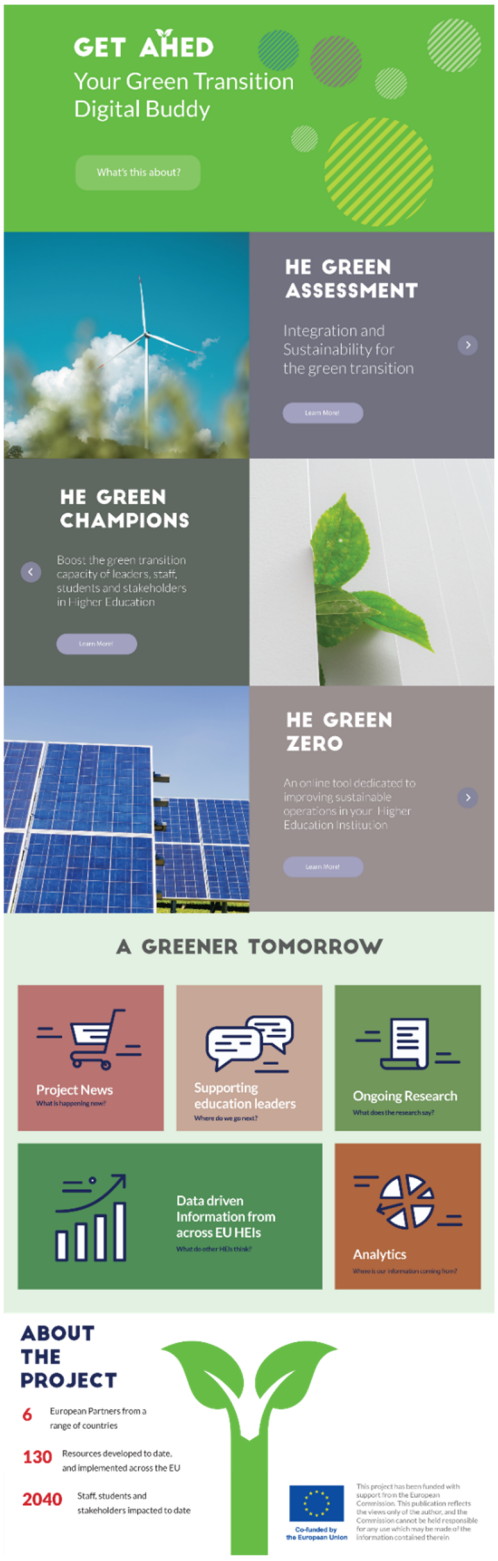
GET-AHED

Green Education & Transition - A Higher Education online Digital Buddy

DELIVERABLE 4.1

Good Practice Examples and Gap Analysis

31st January 2024



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Basic project information

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End	January 2026
Website	www.get-ahed.eu
Project team	
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	Universidade de Aveiro, Portugal (UAveiro)
	Munster Technological University, Ireland (MTU Hincks and MTU TEL)
	University of Ruse “Angel Kanchev”, Bulgaria (URAK)
	FHV - Vorarlberg University of Applied Sciences, Austria (FHV)
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Information on the Report

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Executive Summary

The GET-AHED (Green Education & Transition – A Higher Education Online Digital Buddy) project aims to develop a digital platform which will provide HEIs across the EU with a range of online tools to enable them to implement the EU's Green Transition and Green Education and Training priorities. GET-AHED will act as a green transition digital buddy for the HE community across the EU.

Work package 4 of the project focuses on the creation of an online tool (HE Green Zero) dedicated to improving sustainable operations in HEIs relevant to energy and energy related systems and focused on the goal of achieving net zero energy on school/campus sites. The tool is based on a range of available best practice examples.

This report is D4.1 of the project proposal and provides a status quo report on good practice examples from the consortium as well as a gap analysis for further good practices. The document serves as a foundation for the following steps towards the peer review of the good practice examples and the subsequent decision on which good practice examples and other resources will be implemented onto the GET-AHED platform.

To fulfil the expected goals of this report, a systematic survey was sent to all consortium members as well as to collaborating HEIs. The good practices were then analysed, and a first evaluation took place in terms of valuable insight and gaps to be addressed in the upcoming project year.

In total, 28 good practices were reported and analysed. The analysis confirms that the project consortium is among the early adopters in terms of sustainable HEIs with good practices that sometimes go back many years. On the one hand 13 valuable insights which directly influence the GET-AHED platform were identified from the good practice examples. On the other hand, 12 areas with gaps were identified directly or indirectly from the good practice examples. The survey revealed a tendency to select more SDGs than related to the good practices, i.e. some SDGs were selected although a clear connection to the SDG was not apparent. This might be due to a lack of deeper knowledge on the content of each SDG beyond the headlines that everybody knows by heart. Hence, the GET-AHED platform will ensure a strategy to directly link good practices to relevant SDGs. The platform will avoid linking good practices to SDGs that are not explicitly related. Lastly, the analysis of similar platforms combined with the good practice analysis revealed four areas in which GET-AHED could stand out and provide an added value to the community: open access resources, the issue of awareness, simple "implementation calculators", and easily accessible and attractively presented good practices.

In a next step, the review process of the good practice examples will be set-up to ensure a proper selection of the most valuable resources for the GET-AHED platform.

1. Introduction

The GET-AHED (Green Education & Transition - A Higher Education Online Digital Buddy) project aims to develop a digital platform in consultation with associate partner EU ministries, HEI representative bodies and an existing European University alliance which will provide HEIs across the EU with a range of online tools to enable them to implement the EU's Green Transition and Green Education and Training priorities. GET-AHED will act as a green transition digital buddy for the HE community across the EU. The platform will provide a range of tools to allow a multiple of HE stakeholder groups to promote and develop whole institutional approaches to sustainability which will focus on:

- Designing, implementing, and monitoring institution sustainability plans.
- Supporting Higher Education leaders, in embedding sustainability into all aspects of the institution's operations.
- Supporting staff and students in promoting greater involvement in sustainability initiatives both internally and externally.
- Designing, implementing, and monitoring approaches related to sustainability operations of a HEI and in particular energy and energy related systems.

The final deliverables of GET-AHED will be made available on a user-oriented online platform and will be promoted with the assistance of associate partner ministries and HE representative bodies. Ideally, project partners aim to have the online tools and associated training initiatives become the basis of current and future EU-led online green transition initiatives or be integrated into such initiatives. The GET-AHED digital platform is anticipated to have a reach and impact that will be far greater than traditional face-to-face conferences, seminars, and other training events. GET-AHED specifically aims to develop its online tools to be made available on a one-stop digital platform to support HEIs with the green transition.

1.1 Work package 4: HE-Green Zero

The main objectives of work package 4, HE-Green Zero, are:

- Search and discover good practice examples or Green Zero approaches in HEIs as well as good practice examples outside HEIs that can be adapted to the special needs of HEIs.
- Evaluation of good practice examples in peer review settings together with relevant stakeholders from industry, politics, and society.
- Support knowledge transfer from advanced to developing HEIs in terms of green transition and enable knowledge transfer from other public institutions (like state governments) to HEIs.
- Create content for the digital GET-AHED platform concerning zero emission HEIs with a special emphasis on the EU green transition agenda.

This document is deliverable 4.1 and is a status quo report on good practice examples and a gap analysis of the consortium. It summarises the steps of Task 4.1 to be finished in year 1 and partly those of Task 4.2 which was intended to continue for another 3 months in year 2.

1.2 Good Practice Examples

Good practice examples are necessary to set up the GET-AHED platform in terms of zero emission HEIs. The goal is to learn from each other, adapt available good practices and, therefore, pave the way for Green Zero approaches in HEIs. Hence, the consortium developed an online survey to gather information about good practices in a systematic manner. Afterwards, the good practice examples were evaluated based on specific criteria, already defined in the proposal: sustainable development goals, key indicators like budget, adaptability, and regional aspects as well as the EU green transition agenda.

1.3 Gap Analysis

Having gathered, analysed, and evaluated the good practice examples, a gap analysis took place in which relevant gaps on the way to a more sustainable operation of campuses were identified. Relevant topics based on the proposal were energy and water consumption, mobility and transport, greening of teaching and learning environment, and infrastructure.

2. Method

To get a first overview about available good practices of the GET-AHED project partners, a survey was developed by FHV in collaboration with the consortium partners that allows a structured analysis of available good practices and at the same time gives insights into gaps within the HEIs of the consortium. As the number of HEIs within the consortium is limited, it was decided to send the survey also to associated partners and HEIs with whom the project consortium regularly collaborates. In total, the survey was sent to about ten HEIs. The number was not increased further, as in a first step it is necessary to get an idea on the amount and quality of such good practices in HEIs which distinctly pursue a sustainability agenda. Using the analogy of product development, these HEIs could be seen as “innovators” or “early adopters”. Before having physical meetings at the partner HEIs, best practices were collected via an online survey. This allows the consortium to scale their survey to even more HEIs in the subsequent gathering of further good practices that close the gaps identified in this report.

Figure 1 shows the landing page of the survey. The full survey can be found in **Appendix A: Survey**.

The main features of the survey were:

- Landing page
  The landing page included not only an introduction to GET-AHED but also an explanation on the purpose of the survey, notes on data processing, and a definition of good practices.
- General information
  Although the whole survey was anonymous, general information about the country, region, and role of the respective person within their HEI was collected.
- Good practice examples
  To emphasise on high-quality descriptions of the good practices reported, we decided to include two good practice examples. One of the examples was a classic good practice (PV unit installed), the other one was triggered by the combination of energy-related aspects and digitalisation of teaching (Blended Learning Strategy – Hybrid Teaching).
- Description of good practices
  Having seen the examples, participants of the survey described their good practices, gave background information about the funding (yes/no), about the sector of the good practice and its link to energy-related SDGs (SDG 6, 7, 9, 12, and 13) as well as to other SDGs (1, 2, 3, 4, 5, 8, 10, 11, 14, 15, 16, 17). The participants also had the option of providing additional information via links, files etc.

In total, 28 good practices were reported and are analysed in this report.

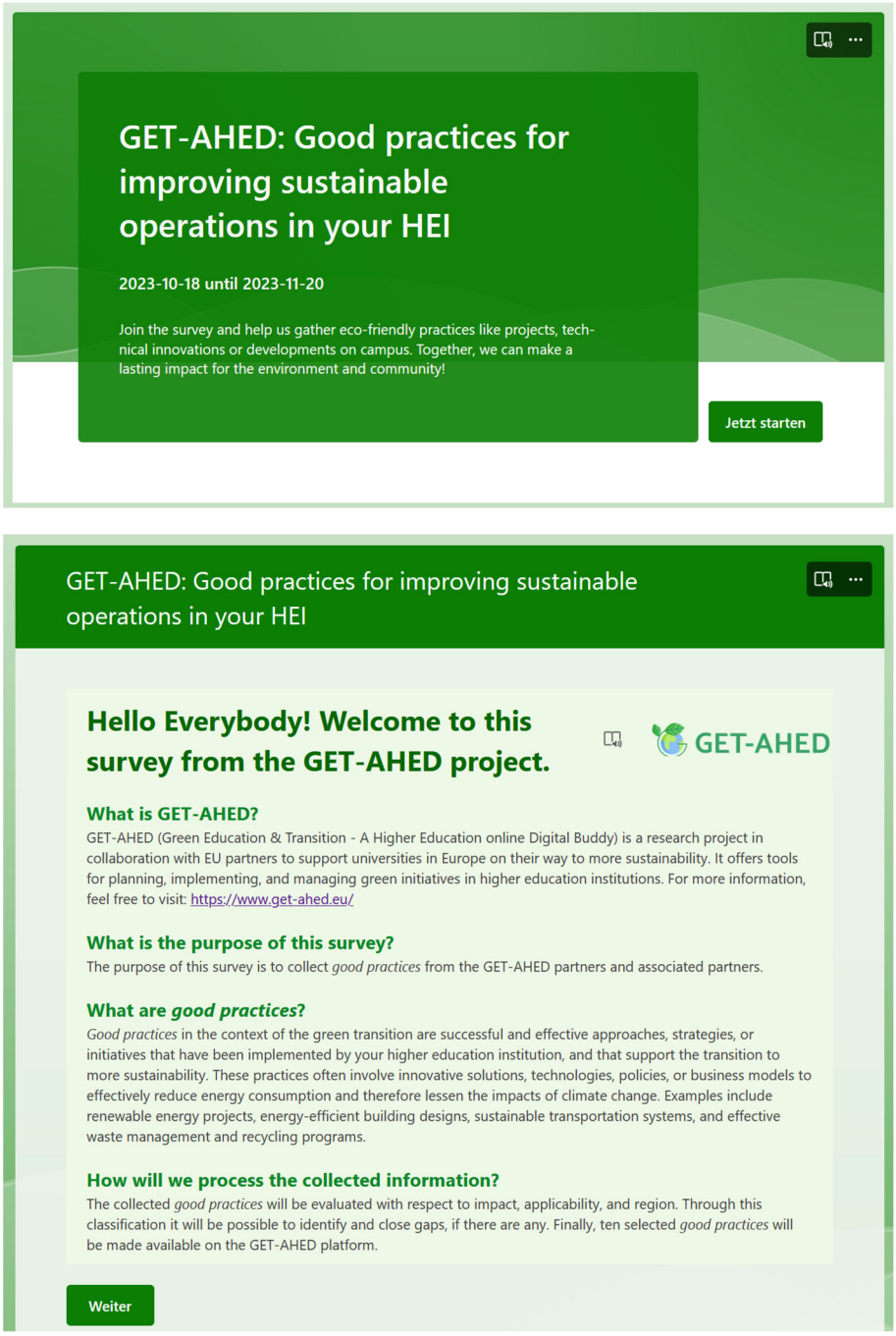


Figure 1: Landing page of survey for WP 4 (Green Zero HEIs)

3. Results

In total 28 good practices were reported, with 23 coming from consortium members, and 5 being reported by collaborating HEIs. One good practice (MTU green campus) was reported twice – once by a management staff and once by a technical officer.

The good practices come from Ireland (8), Bulgaria (6), Austria (5), Portugal (4), Romania (4) and Germany (1). Although most good practices were reported by management staff, some good practices have also been reported by technical staff, staff and even students. Hence, a broad overview on good practices has been ensured.

3.1 Good Practice Examples

The analysis of the good practice examples revealed that on a meta level a broad heterogeneity exists. Good practices without any financial investment (e.g. teaching-free weeks during heating season) on the one side, but with large infrastructure investments (e.g. a ground source heating system or a hybrid ice-storage system) on the other side. Good practices span from short term measures with immediate impact (e.g. PV units or wind turbines) to long term measures with delayed impact (e.g. planting a whole forest). Some are focused on specific SDGs and specific sectors (e.g. an electric car for business trips), while others have a more holistic character (e.g. MTU green campus).

Due to this heterogeneity, the good practices were evaluated individually instead of classifying all 28 good practices based on specific features. This is in line with the idea of GET-AHED in general and work package HE-Green Zero in particular, since good practices qualified for the GET-AHED platform must be relevant, adaptable and applicable to different HEIs. This ensures that the GET-AHED platform highly impacts the sustainability goals of the EU. Hence, the valuable aspects of the good practices in terms of the GET-AHED platform are summarised subsequently:

- Teaching-free weeks with reduced heating or cooling effort is an easy and adaptable option for saving energy, money and CO_2.
- The supply of food based on regional products is a good practice often implemented at HEIs. The GET-AHED platform should have food supply as a dedicated topic for more sustainable operation of HEIs.
- Installation and operation of PV-units are common in some HEIs. More advanced technologies are not so well known (ice-storage systems, ground source heating, wind turbines). GET-AHED should offer resources on sustainable technologies for heating, cooling and electricity production in HEIs.
- Good practices on sustainable technologies in combination or within research projects/teaching can be included in the platform.
- Some good practices of the GET-AHED consortium have been developed within large research projects (e.g. the footprint calculator of EUSTEPS). These good practices should be connected to the GET-AHED platform in terms of links to the original website.
- Some good practices start with a small step but end up in a huge movement (e.g. the “Plant the future initiative”). Such journeys – from the beginning to the end – should be adequately presented on the platform.
- Some good practices are very challenging as they address certification (Green Labs). However, resources for development into the right direction can be provided without emphasis on the certification.

- As innovators and early adopters, the consortium is experienced in large-scale good practices that are more commonly sustainability strategies than small measures (e.g. MTU green campus).
- The consortium has some relevant good practices in terms of mobility management. Thus, this topic should be covered on the platform explicitly.
- Some good practices are related to the energy/environmental sector but also have social implications (e.g. the recycling system of UAveiro that also gives access to meals on the student card).
- Some good practices are "no-brainers" if they are correctly presented and well-documented. To give an example, most HEIs that have technical labs also have a compressor unit. These compressors are very often over-dimensioned.
- The good practice "Next big challenge" is a perfect showcase for easy access, swarm intelligence, potentially large impact, and general awareness. Such good practices are crucial to make the GET-AHED platform interesting for a broad variety of staff and students. Another option are the awareness days reported.

3.2 Gap Analysis of Good Practice Examples

Although Chapter 3.1 revealed several valuable aspects of the good practices in terms of the GET-AHED platform, several gaps were identified that must be filled by further analysis of existing good practices, by gathering additional good practices among Europe, and/or discussions with stakeholders. These gaps are summarised subsequently.

- It is necessary to quantify the energy savings of teaching-free weeks.
- The financial benefits of sustainable technologies for heating, cooling and electricity production are not always known. An easy-to-use amortisation calculator could solve this issue.
- Good practices on the commercial operation of prototypes after a research project could help to increase financial benefits and will help the sustainable operation of such prototypes. However, good practice examples on the legal framework on EU-level need to be prepared for the platform.
- Showcase examples from teaching like small PV units or wind turbines are not used to raise awareness as energy data acquisition is not available. Good practices on easy and cheap data acquisition solutions would be helpful to exploit the full potential of such showcases.
- On a meta level GET-AHED should define a guideline, how good practices are connected to relevant SDGs without going into the direction of "Sustainability Washing" or blurriness. Reasonable explanations for linking good practices to specific SDGs must be provided.
- Some good practices reported do not automatically lead to zero emission HEIs as they cover mainly other SDGs. It is necessary to search for more good practices directly leading into the direction of zero emission HEIs.
- Some good practices are not available anymore as the content is outdated (e.g. green games are not found on the play store anymore). GET-AHED must ensure that their content is up-to-date and accessible after the project ends.
- Some good practices might be too overwhelming for users as the good practices are more like holistic strategies (e.g. MTU green campus). We need to be careful to provide the correct number of "chunks" that allows users to really implement the measures in their HEI.
- Some good practices are not adaptable to other European regions. The recycling system reported might work in Portugal but not in countries that already have a deposit system

with deposits higher than the 5 cents reported. Hence, GET-AHED should focus on adaptability of the good practices.

- For some good practices, it is necessary to divide between investment and operational costs and to ensure that the government (mostly covering investment costs) and the HEI (mostly covering the operation costs) are in discussion about the most sustainable solution before a project is realised.
- For some good practices information is scarce (e.g. the electric car for business trips in Austria). GET-AHED will aim for a holistic description of good practices giving all information that was necessary for the decision makers in the first place.
- Some good practices are connected to a digital badge or some kind of certificate. To make GREEN-ZERO HEI more attractive to students, GET-AHED should discuss if such a recognition is possible as well (e.g. digital badge, micro-credentials etc.).

Obviously, the GET-AHED platform cannot fill all these gaps, however, the further analysis of the reported good practices examples and the search for new ones will try to fill the most relevant aspects of the gaps mentioned.

3.3 Analysis of existing platforms

Next to the gap analysis of the good practice examples reported by the consortium members and respective partners, existing and similar platforms were analysed as well. The team focused on platforms that were dedicated to aspects of zero-emission HEIs or at least had some sort of relation to the topic.

In a first step, the address of the webpage and the publisher were summarised. Furthermore, a first classification was done in terms of the general goal of the webpage. Four categories were defined for the classification: good practice examples, training, awareness, and consulting. In the first category, the platform was searched for good practice examples on the way to zero-emission HEIs. Subsequently, it was analysed if the platform offers training courses for students and/or staff of HEIs. Awareness in this framework included platforms that tried to raise awareness of students and/or staff on the topic. Lastly, platforms marked with “consulting” are the ones with commercial interest in the background (mostly operated by companies instead of HEIs).

Table 1 summarises the results for 15 similar platforms including the platform URL, the publisher, and the origin (if available).

Table 1: Similar platforms (selection)

Platform URL	Publisher	Origin	Good	Traini	Aware	Consul
https://greenzero-ax.com/#platform	GREENZERO AX GmbH			X		X
https://www.seai.ie/energyacademy/	Sustainable Energy Authority of Ireland	Government of Ireland		X		
https://nachhaltigeuniversitaeten.at/arbeitsgruppen/co2-neutrale-universitaeten/	Alliance for Sustainable Universities in Austria		X	X		
https://portsmouth.netzero-training.com/	City of Portsmouth College	Portsmouth City Council		X		
https://www.zerocarbonacademy.com/	Zero Carbon Academy			X		
https://heimaterbe.de/startseite/ueber-heimaterbe/dirk-gratzel-de/	HeimatERBE GmbH		X			
https://www.eusteps.eu/	Aristotle University of Thessaloniki / Global Footprint Network	Erasmus+ / National Authority IKY		X	X	
https://www.oekolog.at/	Institut für Unterrichts- und Schulentwicklung	BMBWF	X	X		
https://green-business.ec.europa.eu/eco-management-and-audit-scheme-emas_en	Green-Business	EU-project	X			X
https://wwf.fi/greenoffice/en/	WWF Finland	WWF Finland				X
https://www.hochn.uni-hamburg.de/en.html	University of Hamburg	Bundesministerium für Bildung und Forschung				
https://www.greencampusireland.org/	Green Campus	Government of Ireland		X		X
https://reterus.it/en/goals-and-objectives/	Network of Universities for Sustainable Development Italy		X	X		
https://international-sustainable-campus-network.org/	EPFL (Lausanne)		X			
https://bibliu.com/blog/sustainability-in-higher-education	BibliU Ltd.					
https://esssr.eu/	Hamburg University of Applied Sciences	EU-project		X		

In a next step, the main content and purpose of each platform was summarised together with limitations (see Table 2).

Table 2: Main purpose, remarks, and limitations of similar platforms

Platform URL	Main content and purpose	Limitations
https://greenzero-ax.com/#platform	Training program consisting of three stages (monitoring: track daily food; challenges: consumption behaviour; learning: understanding personal impact)	Direct start of the program not possible; costs not specified
https://www.seai.ie/energyacademy/	Wide range of training offers; some trainings can be started directly on the webpage	Strong connection to Ireland; to get a certificate, sign-up necessary
https://www.city-of-portsmouth-college.ac.uk/employers/net-zero/	UKs first net zero training hub with strong focus on sustainable technologies	Training hub is physical, but might be available online in the future (no specific date given)
https://www.zerocarbonacademy.com/	Commercial academy that helps companies and institutions with training courses to reach their sustainability goals	Fee exists for all training courses; highly commercial approach
https://heimaterbe.de/	Company is strongly related to greenzero-ax; focus on the human being but also offers services for companies	Rather broad approach; no specific training courses online; seems to be developed further
https://www.eusteps.eu/	Supporting the assessment and reduction of the environmental impact of Higher Education Institutions (HEIs); collaborative participatory approach based on the Ecological Footprint	No training course; free teaching material just after registration
https://www.oekolog.at/	Platform for schools that want to become more sustainable	Strong focus on schools, not on HEIs
https://green-business.ec.europa.eu/eco-management-and-audit-scheme-emas_en	Eco-Management and Audit Scheme (EMAS) for organisations to evaluate, report, and improve their environmental performance.	No classic training courses for staff or students of HEIs
https://wwf.fi/greenoffice/en/	helps workplace to reduce its carbon footprint and use natural resources sustainably; offer experts for help, a climate calculator and ready-made communication materials	Only accessible in Finland; target groups are whole organisations
https://www.dg-hochn.de/startpage	HOCH-N stands for “Sustainability at Higher Education Institutions: develop – network – report”; network that provided guidelines for sustainability in HEIs	No training courses, just guidelines as (long) PDFs; more a network that a training platform
https://www.greencampusireland.org/	program consisting of 7 steps; encourages a partnership approach to environmental education, management and action in third level institutions	No training courses; just little material online; more a network than a training platform
https://reterus.it/en/goals-and-objectives/	Sharing platform for information and experiences among Italian universities; working groups about different subjects: Climate Change, Food, Education, Energy, Inclusion and Social Justice, Mobility, Resources and Waste, Universities for Industry	Broad variety of information, however, mostly available just in Italian (especially YouTube videos); no specific training courses

https://international-sustainable-campus-network.org/	ISCN wants to provide an international forum to support higher education institutions in the exchange of information, ideas, and best practices for achieving sustainable campus operations and integrating sustainability in research and teaching.	Network is closed as they want to keep the network in a manageable size; good practice examples available, but just as reports (no interactive or training material)
https://bibliu.com/blog/sustainability-in-higher-education	BibliU is a learning enablement platform that empowers higher education institutions to streamline their textbook and courseware; material for sustainability offered	Sustainability is just a minor aspect; no free training courses available
https://esssr.eu/	framework upon which teaching and research within the remit of sustainability science may be further developed at European universities	Focus on digitally oriented teaching programs, research projects, PhD training and quality scientific publications; not focused on free training material

On a meta-level, the gaps of the existing platforms can be summarised as follows:

- More than 50 % of the platforms offer some kind of training. However, the training is mostly not open-access but hidden "behind financial walls". This is because the platforms are increasingly operated by commercial companies instead of HEIs, non-profit or governmental institutions.
- Interactive material is rarely available.
- The websites mostly do not offer specific resources on the topic of "awareness".
- Many websites focus on a specific country and/or region but they are not covering adaptability to other European regions.
- Some websites have highly sophisticated CO_2 calculators but no website with easy energy data analysis exists.

Based on the specific analysis in Table 1 and Table 2, as well as the meta-analysis it can be concluded that the GET-AHED platform could deliver an added value to sustainability within SDG by addressing the following aspects:

- Training and interactive material should be provided without fees. As such material is time-consuming and costly to develop, GET-AHED should focus on quality instead of quantity.
- Awareness is a highly important topic for implementing sustainability within HEIs, however, just few platforms cover this topic. On the GET-AHED platform, some resources on the topic should be provided.
- Although technical good practice examples exist, it is not possible to evaluate the implementation in another HEI as simple calculators are missing (calculator for energy saving, cost savings or CO_2 reduction). Thus basic calculators regarding the implementation of good practices should be provided.
- Most good practices are hidden in numerous PDF-files, not easily accessible and not adaptable to other HEIs. GET-AHED should ensure that the good practices on the webpage are presented in a different manner.

4. Conclusion

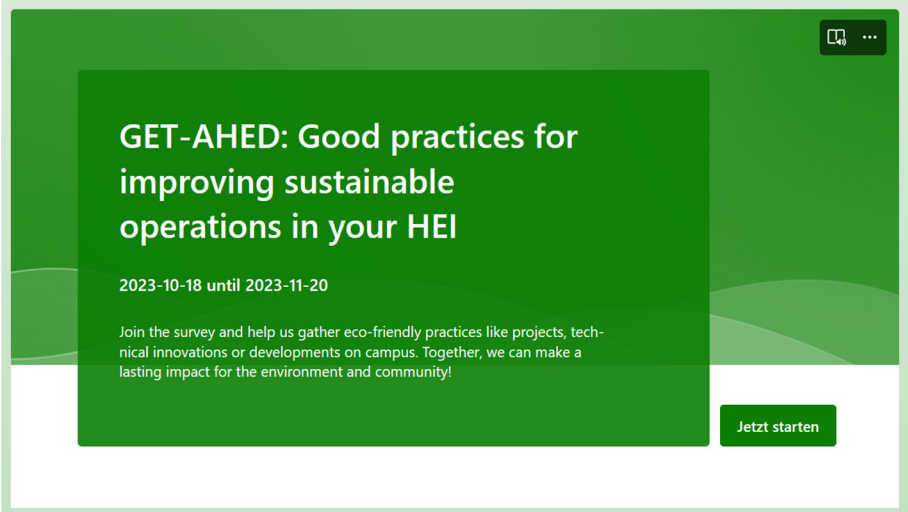
The GET-AHED project aims to develop an online digital platform that supports HEIs on their way to a more sustainable future. This report is part of work package 4 (HE-Green Zero) and summarises existing good practice examples of the consortium members and respective partners. A gap analysis of these examples indicates in which sectors further good practice examples outside the consortium will have to be identified. The report is the foundation for the upcoming discussions with stakeholders, policy makers and society at the end of which is the implementation of the most promising good practice examples onto the platform.

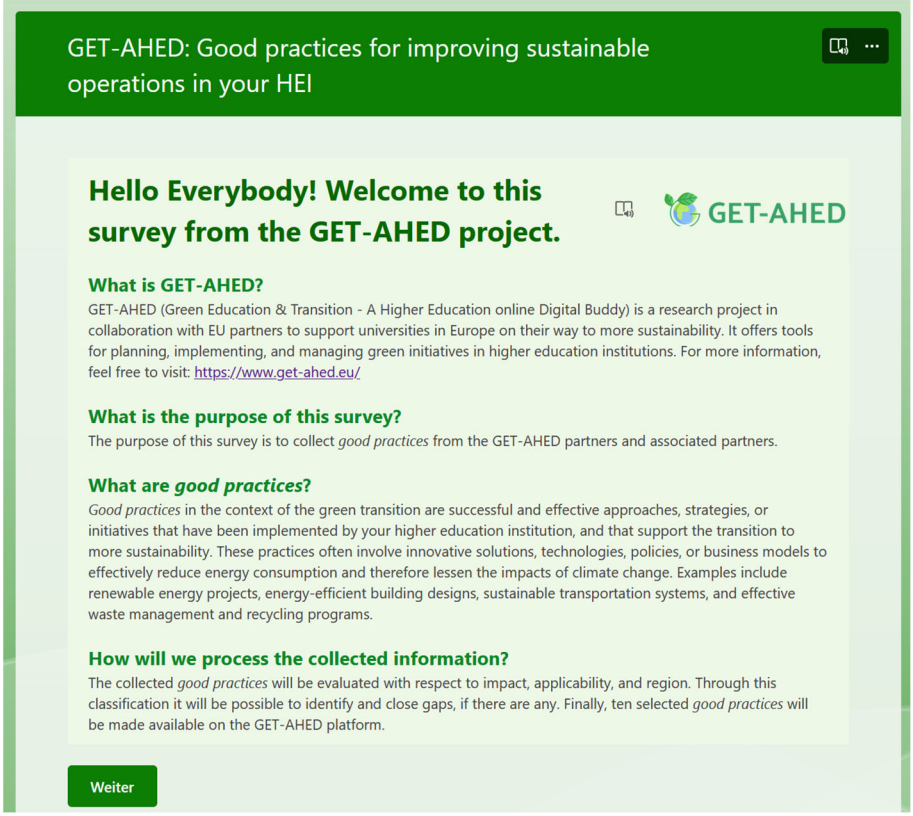
The main conclusions that can be drawn are:

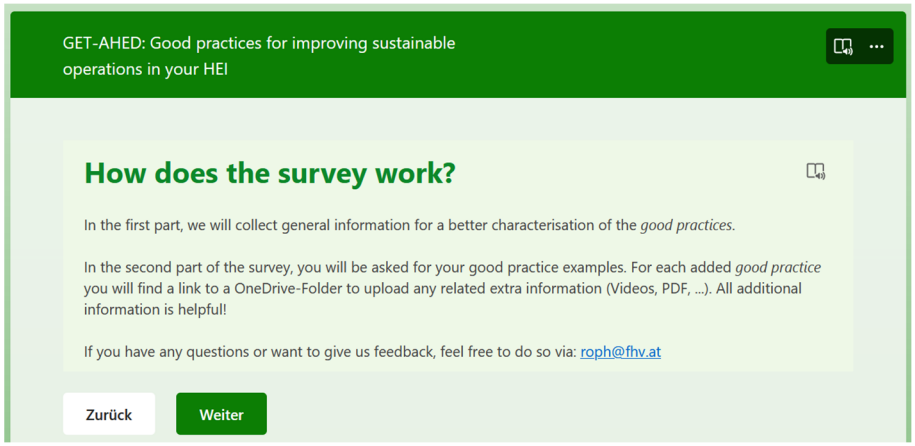
- Although the consortium members – comparable to software engineering – can be seen as early adopters in terms of implementing measures for sustainability, the number of specific good practice examples is still low (less than eight per partner). Thus, even early adopters outside the consortium show a need for the platform to be developed in GET-AHED.
- 13 valuable insights which directly influence the GET-AHED platform were identified from the good practice examples.
- 12 areas with gaps were identified directly or indirectly from the good practice examples.
- The survey revealed a tendency to select more SDGs than related to the good practices as a deeper knowledge on the content of each SDG apart from the headline is missing sometimes. Thus, descriptions of the SDGs should be included on the GET-AHED platform and for each good practice example presented, an explanation why it affects a specific SDGs should be given.
- The analysis of similar platforms revealed four areas in which GET-AHED could stand out and provide an added value to the community: open access resources, the issue of awareness, simple “implementation calculators”, and easily accessible and attractively presented good practices.
- So far, GET-AHED focused on good practice examples from HEIs, however, other educational institutions or non-profit governmental organisations might have implemented adaptable measures as well. Thus, GET-AHED will also search outside HEIs for good practice examples that are adaptable to the special framework conditions of HEIs.

With this report, work package 4 was able to fulfil the planned activities of Task 4.1 and partly Task 4.2, reached Milestone 1 of WP4 in time. Thus, a solid foundation is given for the further steps towards the peer review of the good practice examples.

Appendix A: Survey






GET-AHED: Good practices for improving sustainable operations in your HEI
How does the survey work?
In the first part, we will collect general information for a better characterisation of the good practices.
In the second part of the survey, you will be asked for your good practice examples. For each added good practice you will find a link to a OneDrive-Folder to upload any related extra information (Videos, PDF, ...). All additional information is helpful!
If you have any questions or want to give us feedback, feel free to do so via: roph@fhv.at
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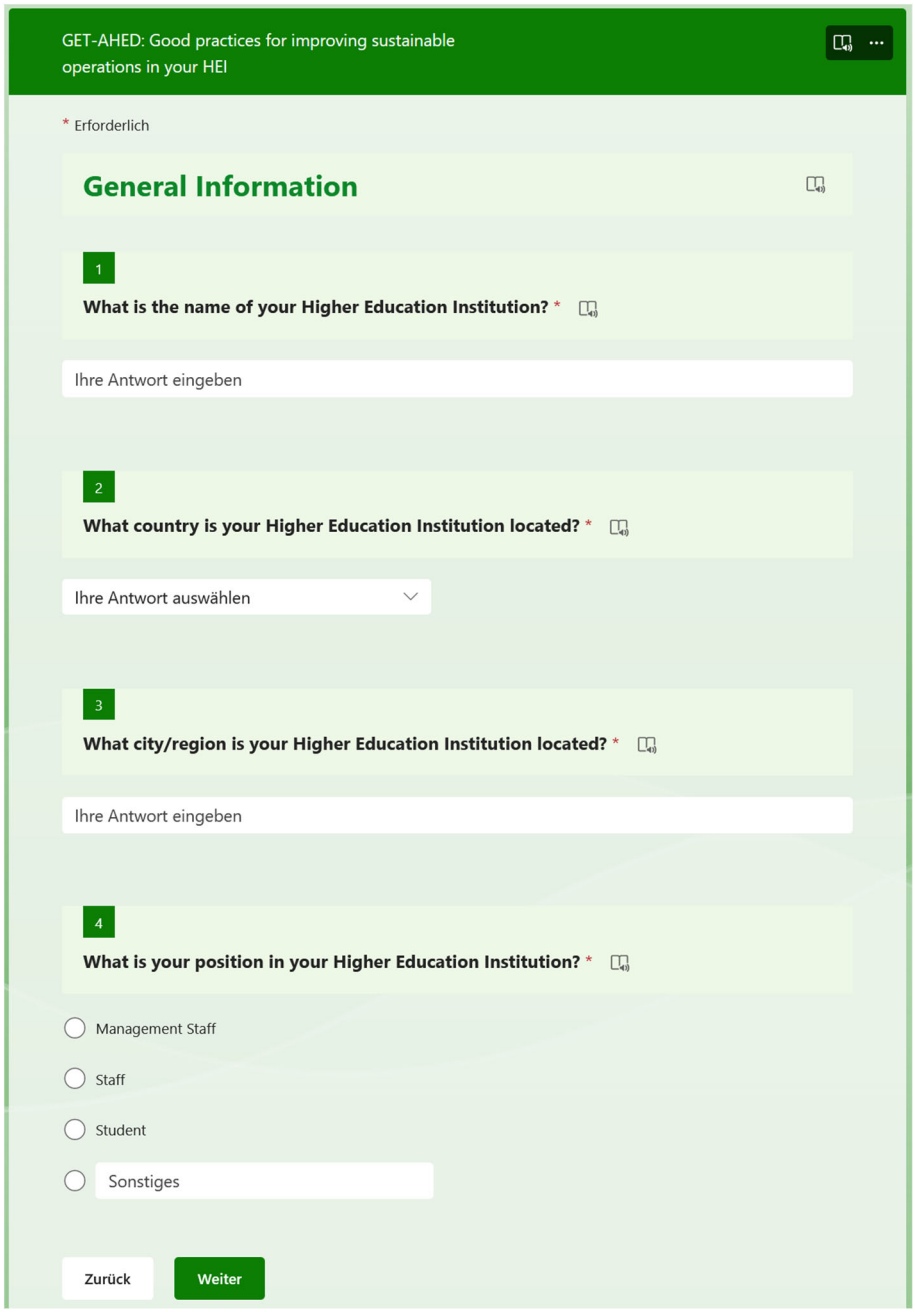
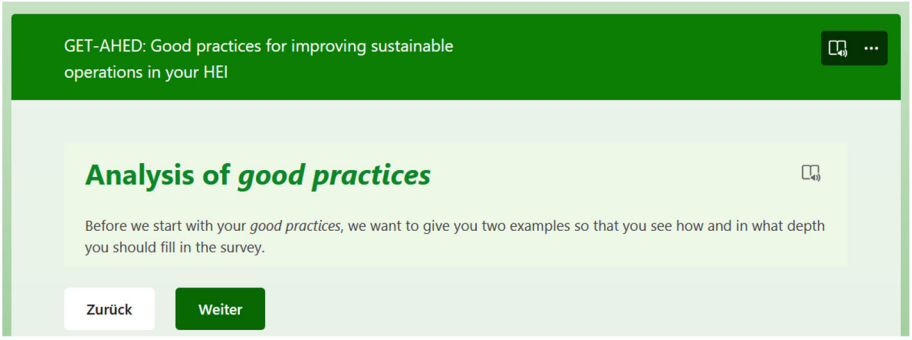
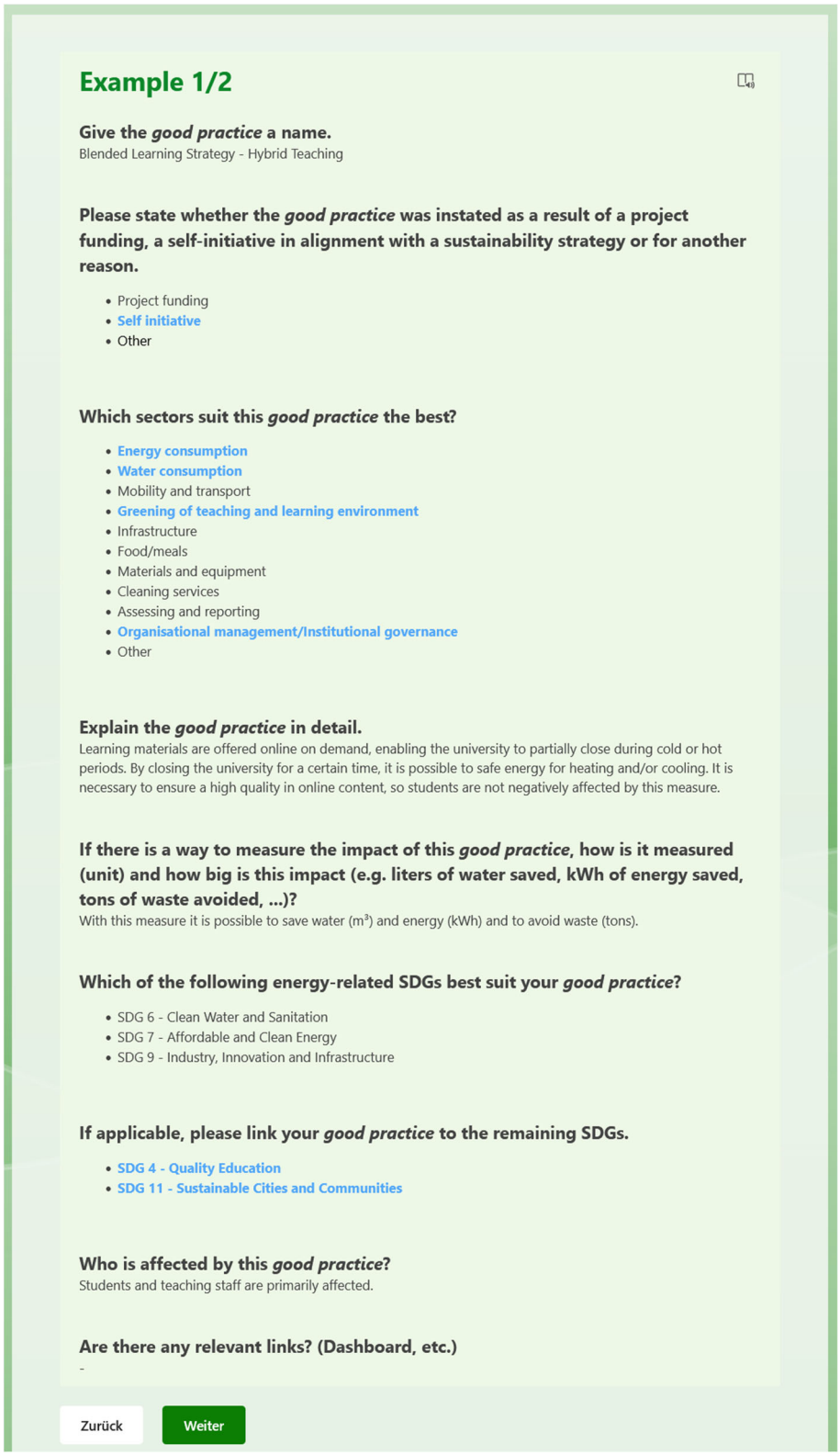

GET-AHED: Good practices for improving sustainable operations in your HEI
* Erforderlich
General Information
1
What is the name of your Higher Education Institution? *
Ihre Antwort eingeben
2
What country is your Higher Education Institution located? *
Ihre Antwort auswählen
3
What city/region is your Higher Education Institution located? *
Ihre Antwort eingeben
4
What is your position in your Higher Education Institution? *
Management Staff
Staff
Student
Sonstiges
Zurück
Weiter


GET-AHED: Good practices for improving sustainable operations in your HEI
Analysis of good practices
Before we start with your good practices, we want to give you two examples so that you see how and in what depth you should fill in the survey.
Zurück
Weiter



Example 1/2

Give the *good practice* a name.
Blended Learning Strategy - Hybrid Teaching

Please state whether the *good practice* was instated as a result of a project funding, a self-initiative in alignment with a sustainability strategy or for another reason.

- Project funding
- **Self initiative**
- Other

Which sectors suit this *good practice* the best?

- **Energy consumption**
- **Water consumption**
- Mobility and transport
- **Greening of teaching and learning environment**
- Infrastructure
- Food/meals
- Materials and equipment
- Cleaning services
- Assessing and reporting
- **Organisational management/Institutional governance**
- Other

Explain the *good practice* in detail.
Learning materials are offered online on demand, enabling the university to partially close during cold or hot periods. By closing the university for a certain time, it is possible to safe energy for heating and/or cooling. It is necessary to ensure a high quality in online content, so students are not negatively affected by this measure.

If there is a way to measure the impact of this *good practice*, how is it measured (unit) and how big is this impact (e.g. liters of water saved, kWh of energy saved, tons of waste avoided, ...)?
With this measure it is possible to save water (m^3) and energy (kWh) and to avoid waste (tons).

Which of the following energy-related SDGs best suit your *good practice*?

- SDG 6 - Clean Water and Sanitation
- SDG 7 - Affordable and Clean Energy
- SDG 9 - Industry, Innovation and Infrastructure

If applicable, please link your *good practice* to the remaining SDGs.

- **SDG 4 - Quality Education**
- **SDG 11 - Sustainable Cities and Communities**

Who is affected by this *good practice*?
Students and teaching staff are primarily affected.

Are there any relevant links? (Dashboard, etc.)
-

Zurück Weiter

Example 2/2

Give the *good practice* a name.
Photovoltaic System

Please state whether the *good practice* was instated as a result of a project funding, a self-initiative in alignment with a sustainability strategy or for another reason.

- Project funding
- **Self initiative**
- Other

Which sectors suit this *good practice* the best?

- **Energy Consumption**
- Water Consumption
- Mobility and Transport
- Greening of Teaching and Learning Environment
- **Infrastructure**
- Food/meals
- Materials and equipment
- Cleaning services
- Assessing and reporting
- Organisational management/Institutional governance
- Other

Explain the *good practice* in detail.
We put a photovoltaic (PV) system on top of our building. Due to the power consumption of the campus and the size of the photovolatic system all of the produced energy is directly used.

If there is a way to measure the impact of this *good practice*, how is it measured (unit) and how big is this impact (e.g. liters of water saved, kWh of energy saved, tons of waste avoided, ...)?
The produced energy of the PV system is measurde in kWh. In a whole year the system produces around 47 000 kWh.

Which of the following energy-related SDGs best suit your *good practice*?

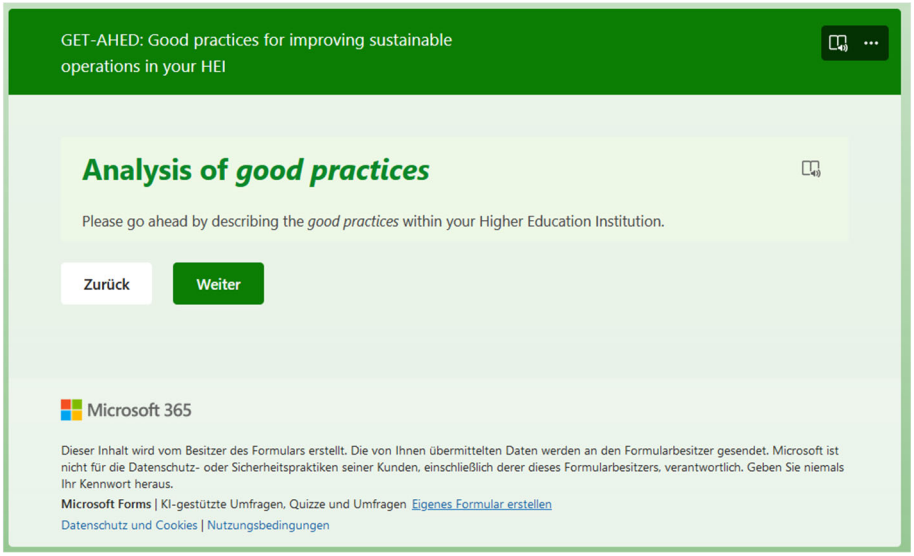
- SDG 6 - Clean Water and Sanitation
- **SDG 7 - Affordable and Clean Energy**
- SDG 9 - Industry, Innovation and Infrastructure
- SDG 12 - Responsible Consumption and Production
- SDG 13 - Climate Action

If applicable, please link your *good practice* to the remaining SDGs.
-

Who is affected by this *good practice*?
Even though the good practice "Photovoltaic System" provides electricity for the campus, which will be used by staff and students, it is more part of the campuses infrastructure.

Are there any relevant links? (Dashboard, etc.)
https://monitoringpublic.solaredge.com/solaredge-web/p/site/public?name=Fachhochschule%20Vorarlberg#/dashboard

Zurück Weiter


GET-AHED: Good practices for improving sustainable operations in your HEI
Analysis of good practices
Please go ahead by describing the good practices within your Higher Education Institution.
Zurück
Weiter
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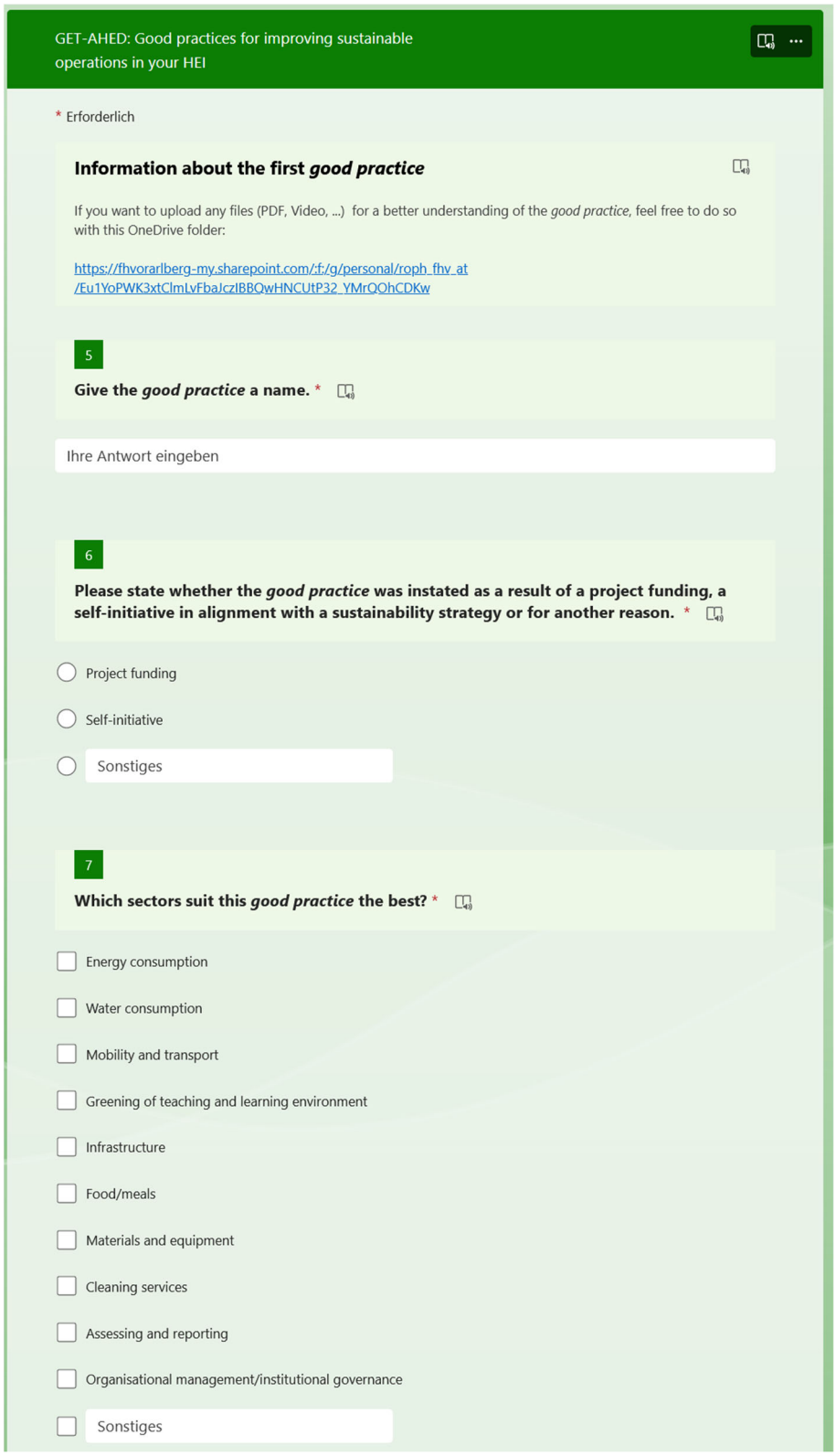


GET-AHED: Good practices for improving sustainable operations in your HEI

* Erforderlich

Information about the first *good practice*

If you want to upload any files (PDF, Video, ...) for a better understanding of the *good practice*, feel free to do so with this OneDrive folder:

https://fhvorarlberg-my.sharepoint.com/:f:/g/personal/roph_fhv_at/Eu1YoPWK3xtClmLvFbaJczIBBQwHNCUtP32_YMrQOhCDKw

5

Give the *good practice* a name. *

Ihre Antwort eingeben

6

Please state whether the *good practice* was instated as a result of a project funding, a self-initiative in alignment with a sustainability strategy or for another reason. *

- ○ Project funding
- ○ Self-initiative
- ○ Sonstiges

7

Which sectors suit this *good practice* the best? *

- ☐ Energy consumption
- ☐ Water consumption
- ☐ Mobility and transport
- ☐ Greening of teaching and learning environment
- ☐ Infrastructure
- ☐ Food/meals
- ☐ Materials and equipment
- ☐ Cleaning services
- ☐ Assessing and reporting
- ☐ Organisational management/institutional governance
- ☐ Sonstiges

8

Explain the *good practice* in detail. *

Ihre Antwort eingeben

9

If there is a way to measure the impact of this *good practice*, how is it measured (unit) and how big is this impact (e.g. liters of water saved, kWh of energy saved, tons of waste avoided, ...)?

Ihre Antwort eingeben

10

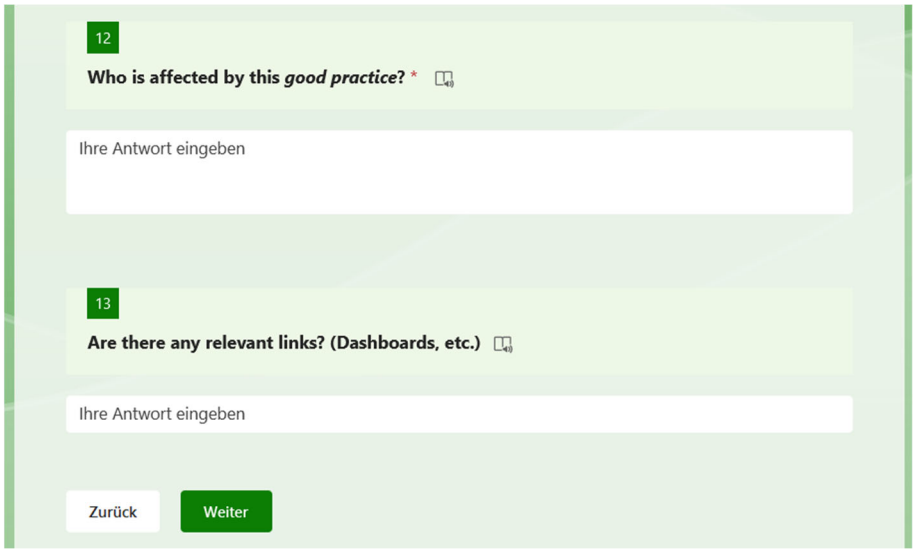
Which of the following energy-related SDGs best suit your *good practice*? *

- [ ] SDG 6 - Clean Water and Sanitation
- [ ] SDG 7 - Affordable and Clean Energy
- [ ] SDG 9 - Industry, Innovation and Infrastructure
- [ ] SDG 12 - Responsible Consumption and Production
- [ ] SDG 13 - Climate Action

11

If applicable, please link your *good practice* to the remaining SDGs.

- [ ] SDG 1 - No Poverty
- [ ] SDG 2 - Zero Hunger
- [ ] SDG 3 - Good Health and Well-Being
- [ ] SDG 4 - Quality Education
- [ ] SDG 5 - Gender Equality
- [ ] SDG 8 - Decent Work and Economic Growth
- [ ] SDG 10 - Reduced Inequalities
- [ ] SDG 11 - Sustainable Cities and Communities
- [ ] SDG 14 - Life below Water
- [ ] SDG 15 - Life on Land
- [ ] SDG 16 - Peace, Justice and strong Institutions
- [ ] SDG 17 - Partnership for the Goals


12
Who is affected by this *good practice*? *
Ihre Antwort eingeben
13
Are there any relevant links? (Dashboards, etc.)
Ihre Antwort eingeben
Zurück
Weiter

Appendix B: Good Practices Reported

Good Practice 1

Name	Teaching-free weeks
Country and Region	Bulgaria, Ruse
Position of author in HEI	Management Staff
Origin	
Related sector(s)	Energy Consumption
Description	From the end of December till the end of January there are no classes at the university and the heating system is set to minimum effort. There are no classes in July and August and the energy consumption for cooling the buildings is limited only to the administrative facilities.
KPI(s)	Seasonal energy consumption (kWh and EUR)
Energy-related SDG(s)	SDG 12 - Responsible Consumption and Production
Other SDG(s)	
Impact on	Entire University
Further resources	

Good Practice 2

Name	Savour Food Programme
Country and Region	Ireland, Cork
Position of author in HEI	Technician Staff
Origin	
Related sector(s)	Environmentally sustainable teaching / learning
Description	Savour Food is a support programme for Irish foodservice businesses. The core aim of Savour Food is to help businesses reduce food waste and save money. The programme has developed a wide range of resources for implementation within Higher Education training programmes – in particular in the area of tourism and hospitality teaching. The Clean Technology Centre, which is based in Munster Technological University, has developed a wide range of resources that are made available to lecturers teaching on tourism and hospitality courses which can be quickly integrated into the curriculum to teach about food waste in the area. They have also developed an online course and digital badge for same to motivate students to engage in this training.
KPI(s)	
Energy-related SDG(s)	SDG 12 - Responsible Consumption and Production
Other SDG(s)	
Impact on	Higher Education Institutions, Students, Instructors, Industry Stakeholders
Resources	https://savourfood.ie/

Good Practice 3

Name	PV park Kanev
Country and Region	Bulgaria, Ruse
Position of author in HEI	Management Staff
Origin	Self-initiative
Related sector(s)	Energy Consumption; Infrastructure
Description	A small 12.6 kWp photovoltaic park was constructed in the university, using mostly donations of companies. The main purpose of the park is to be used as a research and training facility, where the available technologies could be investigated and demonstrated. Of course, some energy is also being generated for the university.
KPI(s)	The total energy yield of the system so far is 20.83 MWh. Furthermore, at least 4 research papers have been prepared so far.
Energy-related SDG(s)	SDG 7 - Affordable and Clean Energy SDG 12 - Responsible Consumption and Production
Other SDG(s)	SDG 4 - Quality Education SDG 11 - Sustainable Cities and Communities;
Impact on	On one side, the university gets some free energy. On other side, the students of the university get access to the infrastructure and allows them to gain practical knowledge.
Resources	

Good Practice 4

Name	Small Hybrid PV Park
Country and Region	Bulgaria, Ruse
Position of author in HEI	Management Staff
Origin	Self-initiative
Related sector(s)	Energy Consumption; Infrastructure
Description	This is a small 3 kWp wall attached PV park, using the shingle technology. Furthermore, it has a 14 kWh Li-Ion battery and a hybrid inverter. Currently the PV park is used to guarantee the energy consumption of a meteo station, and the remaining energy enters the university's electrical network. It will also be used to demonstrate these technologies to students.
KPI(s)	The hybrid demonstration PV park was just created (in October 2023) so there isn't any significant impact yet.
Energy-related SDG(s)	SDG 7 - Affordable and Clean Energy; SDG 12 - Responsible Consumption and Production;
Other SDG(s)	SDG 4 - Quality Education; SDG 11 - Sustainable Cities and Communities;
Impact on	The university will be affected as it will gain some energy produced and a new infrastructure, which can be used for research. The students will also be affected as they will be able to observe the operation of such facility and gain practical skills.
Resources	

Good Practice 5

Name	Micro Wind Generator
Country and Region	Bulgaria, Ruse
Position of author in HEI	Management Staff
Origin	Self-initiative
Related sector(s)	Energy Consumption; Infrastructure
Description	A micro wind turbine was installed 5 years ago with a power of 300 Wp. It is installed on a 30m high pylon and allows to demonstrate the wind potential in the urban environment of Ruse.
KPI(s)	The micro wind turbine is used mainly for demonstration purposes, so no information is available about its energy impact.
Energy-related SDG(s)	SDG 7 - Affordable and Clean Energy
Other SDG(s)	SDG 4 - Quality Education SDG 11 - Sustainable Cities and Communities
Impact on	This good practice mainly affects the education of students as it provides means for demonstration. Though there is also some minimal impact for the university in terms of energy gains.
Resources	

Good Practice 6

Name	Combined Heat Pump Ice Storage System
Country and Region	Germany, Bayreuth
Position of author in HEI	Staff
Origin	Self-initiative
Related sector(s)	Energy consumption
Description	The ice energy storage system is installed in the courtyard of the Technology Alliance Upper Franconia (TAO) building, which houses the Center for Energy Technology (ZET) of the University of Bayreuth. The storage system is used as a heat source for a heat pump and is regenerated by the cold-water network that supplies the waste heat, which can also act as a direct source for the heat pump.
KPI(s)	The existing system can reduce CO_2 emissions by 37% at optimal operation compared to conventional heating and cooling.
Energy-related SDG(s)	SDG 9 - Industry, Innovation and Infrastructure;
Other SDG(s)	
Impact on	Plant operators of non-residential buildings.
Resources	

Good Practice 7

Name	Plant the Future Initiative
Country and Region	Portugal, Aveiro
Position of author in HEI	Management Staff
Origin	Self-initiative
Related sector(s)	Greening of teaching and learning environment; Organisational management / institutional governance; Engaging with community
Description	The "Planting the Future" initiative was born in 2018 from a partnership between the University of Aveiro (UAveiro), the youth association Agora Aveiro - Association for the Promotion of Active Citizenship and the Municipality of Estarreja with the commitment to secure and promote the native forest and its value in climate change mitigation, fire resilience and biodiversity conservation. By involving the entire academic community, it also promotes environmental awareness and education, contributing directly and indirectly to the recovery of the native forest. This project is the expansion of "Biologia a Plantar o Futuro", an initiative that emerged in 2014 at the will of the students of the Degree in Biology at the UAveiro. The "Planting the Future" is based on the idea that small actions can have a big impact. The entire academic community is challenged to adopt an autochthonous tree, take care of it and, finally, plant it, helping to build a forest! In addition to adopters, this initiative involves its promoters, volunteers, and different partners, ultimately having an impact on each of them. For UAveiro, this project, in addition to playing an important role in the strategy adopted to reach carbon neutrality, along with other social responsibility initiatives, contributes significantly to the acquisition of soft skills and the integral development of students, promoting values such as solidarity, commitment and mutual help. Alder, arbutus, black poplar, ash, white willow to chestnut, pyrenean oak or alvarinho oak, these are some of the autochthonous species distributed and

	planted with this initiative, which takes place in six steps: 1) Where it all begins - runs from May to June, where small native trees are purchased from a certified local producer, which are later transplanted into larger pots to allow for their growth and development. 2) Maintenance - runs from June to October, where the trees are watered and maintained by the Technical Team of the Municipality of Estarreja, in their own greenhouses, until the adoption phase. 3) Adoption - takes place in October, when the trees are handed over to the academic community. 4) Taking care of the tree - runs from October to February, where adopters take care of their small trees, always with the support of the project monitoring team. 5) Let's plant the future - taking place between February and March, where all adopters are invited to participate in reforestation actions and control of invasive plants. 6) Make it grow - starting in March, where, after being planted, the trees are taken care of by the Technical Team of the Municipality of Estarreja, to make them grow and create a forest. Through the project, thousands of trees have already been planted in the National Forest of Buçaco and in the Municipalities of Albergaria-a-Velha, Lousada and Estarreja, also contributing to the awareness and education for sustainability of hundreds of university students. Environmental education involves the development of a set of guides with information on how to care for trees. These guides, made with the scientific support of the Department of Biology of UAveiro and delivered to adopters in step three, contains information about the native species used in the project, about invasive alien species and about the Portuguese Forest.
KPI(s)	Number of trees planted and number of participants in the actions
Energy-related SDG(s)	SDG 13 - Climate Action

Other SDG(s)	SDG 4 - Quality Education SDG 15 - Life on Land SDG 16 - Peace, Justice and strong Institutions SDG 17 - Partnership for the Goals
Impact on	Entire University Community; Society
Resources	https://www.un.org/en/academic-impact/academic-community-planting-future-sustainable-initiative#:~:text=As%20a%20response%20to%20this,for%20the%20Promotion%20of%20Active

Good Practice 8

Name	Quality Management System implemented in Social Services of the University of Aveiro
Country and Region	Portugal, Aveiro
Position of author in HEI	Management Staff
Origin	Self-initiative
Related sector(s)	Food/meals
Description	The services provided by the Social Services (SASUA) of the University of Aveiro (UAveiro) are certified by the ISO 9001:2015 standard. The scope of the certification covers all of SASUA's activities, i.e. the services it provides to its users, namely in the areas of financial support for students (scholarships), accommodation, food, sport, culture, health, cooperation, bibliographical and school/learning materials. In a strategy to progressively reduce the ecological footprint and minimize the environmental impact resulting from its activity and to bet on the quality of its products, the SASUA have been trying to establish supply lines with local vegetable producers to supply its food units. The SASUA's strategy found support in a legislative framework that allows, in a public tender, to apply bonus criteria that benefit suppliers with their production and processing units in the same NUTS III (Nomenclatures of Territorial Units III), in this case, corresponding to Baixo Vouga. It has always been clear to UAveiro that it is important to have good raw material, and such purpose would involve finding local producers to supply UAveiro and monitor production. Taking advantage of the legal framework that allows privileging local producers and distributors, in public tenders by applying the criteria for bonuses, SASUA intend to create supply chains with local producers, thus reducing transport time, storage time and cold storage. With this, better product quality is guaranteed, and carbon emissions are reduced.

	Encouraging the use of SASUA's food units is a priority, which means favouring local producers to obtain fresher raw materials.
KPI(s)	Reducing food waste, reducing the distance between producers and consumers, establish supply lines with local vegetable producers to supply its food units
Energy-related SDG(s)	SDG 12 - Responsible Consumption and Production;
Other SDG(s)	SDG 3 - Good Health and Well-Being;
Impact on	Entire University Community; Local Suppliers
Resources	

Good Practice 9

Name	Green Labs
Country and Region	Ireland, Cork
Position of author in HEI	Technical Officer
Origin	Self-initiative
Related sector(s)	Energy consumption; Water consumption; Greening of teaching and learning environment; Materials and equipment;
Description	"Labs comprise an industry that is three times larger than the construction industry and half the size of the automotive industry. Labs, for all their good intentions, are estimated to discard over more than 5.5 million metric tonnes of plastic each year, which is enough to cover an area 23 times the size of Galway ankle-deep. They also consume 5-10 times more energy and water than office spaces. If every lab in Ireland were to turn off just one piece of equipment overnight for a year, it would be the equivalent to offsetting the greenhouse gas emissions associated with driving 2.8 million kilometres." (Alison Paradise, CEO of My Green Lab) Spearheaded by Dr. Una Fitzgerald, a CÚRAM funded Investigator and Director of the Galway Neuroscience Centre at University of Galway. Together with her 'green team' of CÚRAM researchers and staff, and with the support of the University Registrar and Deputy President, Professor Pól Ó Dochartaigh, and the Community University Sustainability Partnership, she is working to transform practice across campus to address issues such as plastic waste, energy reduction, recycling, and water usage.
KPI(s)	Plastic waste, energy reduction, recycling, and water usage before and after the implementation of the initiative.
Energy-related SDG(s)	SDG 6 - Clean Water and Sanitation SDG 9 - Industry, Innovation and Infrastructure SDG 12 - Responsible Consumption and Production SDG 13 - Climate Action
Other SDG(s)	SDG 4 - Quality Education SDG 3 - Good Health and Well-Being SDG 11 - Sustainable Cities and Communities

	SDG 14 - Life below Water SDG 15 - Life on Land
Impact on	Staff and students in research labs who lead these green initiatives are immediately impacted, while society as a whole benefits from less waste produced by research labs.
Resources	Press release: https://www.universityofgalway.ie/about-us/news-and-events/news-archive/2019/december/curam-launch-galway-green-labs---the-first-in-europe-to-be-awarded-green-lab-certification.html Video: https://vimeo.com/375847945

Good Practice 10

Name	Green Games in Tourism and Hospitality
Country and Region	Ireland, Cork
Position of author in HEI	Technical staff
Origin	Project funding
Related sector(s)	Energy consumption; Water consumption; Food/meals; Materials and equipment; Cleaning services
Description	The Erasmus+ Green Games in Tourism / Hospitality project (http://greengamesproject.com/) was led by the Department of Technology Enhanced Learning in MTU and sought to innovate & support improvements in sustainable practice in the tourism & hospitality VET systems & practices by developing a digital "serious" game along with associated guidelines & training (VET = vocational education and training). It achieved this by creating a game to develop skills & competencies in the areas of food, water & energy waste - primarily for tourism and hospitality students. This game was subject to testing, feedback & re-development a number of times over the course of the project to align it as closely as possible to the needs of the European tourism & hospitality VET sector and is currently freely available on all major mobile formats. Feedback from pilot participants (those receiving, providing, or participating in vocational training in the tourism & hospitality sector) indicated an extremely positive opinion towards the use of the game for teaching & learning in the tourism & hospitality VET sector. All outputs, including the developed game, were freely available for the target audience & general public to use under a creative commons license via the google play store and the apple app store. In addition to a number of European conferences, the project & its results were also demonstrated at an international Malaysian conference. Interest in the game has been expressed by education & commercial institutes from both European & non-European countries. The project game has been

	added to a number of international databases for educational games.
KPI(s)	Number of downloads from the Google play store (http://goo.gl/YF0qNM) and Apple store (http://goo.gl/IlvmHv). Number of views of the animated training videos on YouTube.
Energy-related SDG(s)	SDG 6 - Clean Water and Sanitation SDG 7 - Affordable and Clean Energy SDG 12 - Responsible Consumption and Production SDG 13 - Climate Action;
Other SDG(s)	SDG 8 - Decent Work and Economic Growth SDG 11 - Sustainable Cities and Communities
Impact on	Mainly students in hospitality and tourism
Resources	http://greengamesproject.com/

Good Practice 11

Name	MTU Green Campus
Country and Region	Ireland, Cork
Position of author in HEI	Technical officer
Origin	Self-initiative
Related sector(s)	Energy consumption; Water consumption; Greening of teaching and learning environment; Organisational management / institutional governance
Description	Objectives of the 2030 Energy Reduction Plan: • Meet our Energy Reduction Commitments as regards of the "National Energy Efficiency Action Plan" • Reduce current energy consumption at the Munster Technological University by evaluation of areas of energy consumption, identifying where waste is and implementing a waste energy reduction plan (by means of awareness and engineering methodologies) • Reduce current carbon dioxide related emissions at the MTU to meet with 2030 targets • Convert energy wastage into budget surplus • Create an action plan how to handle current legislative requirements • Continue partnership with the SEAI and OPW to assist us in our energy reduction goals
KPI(s)	• Energy savings in % compared to a baseline • m^3 of water per student • Waste reduction in % compared to a baseline • Waste to landfill ratio
Energy-related SDG(s)	SDG 7 - Affordable and Clean Energy SDG 9 - Industry, Innovation and Infrastructure SDG 13 - Climate Action SDG 6 - Clean Water and Sanitation SDG 12 - Responsible Consumption and Production;
Other SDG(s)	SDG 4 - Quality Education

	SDG 8 - Decent Work and Economic Growth SDG 11 - Sustainable Cities and Communities SDG 3 - Good Health and Well-Being SDG 14 - Life below Water SDG 15 - Life on Land
Impact on	Students, staff, wider community, and society
Resources	https://www.mtugreencampus.ie/

Good Practice 12

Name	Transport Cost Reduction
Country and Region	Bulgaria, Ruse
Position of author in HEI	Staff
Origin	Self-initiative
Related sector(s)	Mobility and transport Organisational management / institutional governance
Description	In case of organization of business trips (related to the activity of the university) the academic staff and the students are funded in a way to use public transport. This restriction is written even in the internal ERASMUS regulations of the university. In case they use their personal cars for these trips, then the internal regulations stimulate them to be at least two or more people in the car.
KPI(s)	Saved litres of fuel
Energy-related SDG(s)	SDG 13 - Climate Action
Other SDG(s)	SDG 11 - Sustainable Cities and Communities SDG 15 - Life on Land
Impact on	Staff and Students
Resources	

Good Practice 13

Name	Reduction of Energy Costs
Country and Region	Romania, Oltenia
Position of author in HEI	Staff
Origin	Self-initiative
Related sector(s)	Energy consumption
Description	The university starts the heating in mid-November, only a few hours a day during classes, not during the weekends and student vacations. The staff is encouraged to refrain from using the air conditioning and shut down all electrical equipment after the classes.
KPI(s)	Energy savings in kWh
Energy-related SDG(s)	SDG 12 - Responsible Consumption and Production
Other SDG(s)	
Impact on	Entire university
Resources	

Good Practice 14

Name	Research lab "Digital energy systems 4.0"
Country and Region	Bulgaria, Ruse
Position of author in HEI	Management Staff
Origin	Both project funding and self-initiative
Related sector(s)	Energy consumption; Infrastructure;
Description	One of the research labs of the University of Ruse is called "Digital energy systems 4.0". It performs research in the field of renewable energy sources and energy storage devices, with a focus on their application in urban and agricultural areas. The performed research activities include: • Study of the shadowing and soiling impact on the productivity of the PV plants; • Identification of the type of soiling with the use of Machine Learning; • Early identification of different types of problems; • Long-term degradation analysis; • Optimization of the urban planning and design.
KPI(s)	The impact of the good practice can be measured by the numerous research papers (more than 10 annually) and the attracted project funds (more than 50 000 EUR in 2023).
Energy-related SDG(s)	SDG 7 - Affordable and Clean Energy SDG 13 - Climate Action;
Other SDG(s)	SDG 2 - Zero Hunger SDG 8 - Decent Work and Economic Growth SDG 11 - Sustainable Cities and Communities;
Impact on	The results from the performed research activities could be useful for a wide range of stakeholders, such as PV park owners in the domestic and agricultural sector, private business related to renewable energy sources, etc.
Resources	

Good Practice 15

Name	Recycling and Reimbursement of Aluminium and PET Packaging (REAP)
Country and Region	Portugal, Aveiro
Position of author in HEI	Student
Origin	Project funding
Related sector(s)	Materials and equipment; Greening of teaching and learning environment Food/meals
Description	The University of Aveiro (UAveiro) has launched a recycling system that allows students and workers at the University to deposit aluminium and PET packaging and get paid for it. This is done using dedicated equipment and there are a total of six machines available to recycle the packaging. The machines are located at various points on the UA campuses. The value of the deposit is credited to the UA Single Card, which is already associated with the institution's access and payment systems, and differs depending on the size of the package, ranging from two to five cents. It is expected that, with dedicated separation and a lower degree of contamination, the product resulting from the collection will be of a higher quality and there will be an increase in the selective collection of PET and aluminium. This project also has a strong social vocation as it indirectly aims to help UA students in need. Students will be able to "access the food units with the reimbursement" that comes to their card. This is a project that is still in its initial phase, which will be monitored and evaluated and, depending on the results, the system could be extended to the recycling of other waste.
KPI(s)	
Energy-related SDG(s)	SDG 9 - Industry, Innovation and Infrastructure SDG 13 - Climate Action;
Other SDG(s)	SDG 11 - Sustainable Cities and Communities SDG 2 - Zero Hunger SDG 10 - Reduced Inequalities SDG 3 - Good Health and Well-Being SDG 16 - Peace, Justice and strong Institutions;

Impact on	Entire University Community
Resources	https://www.ua.pt/pt/noticias/11/74980 https://www.ua.pt/pt/esan/reap-reciclagem-e-reembolso-de-embalagens-de-aluminio-e-pet-sistema-piloto

Good Practice 16

Name	Reduction of energy costs
Country and Region	Romania, Resita
Position of author in HEI	Staff
Origin	Self-initiative
Related sector(s)	Energy Consumption
Description	During the month of August, there are no classes at our institution, thus the energy consumption is lower than in other periods of the year. Also, a week in December and a week in January, there are no classes, the students are on holiday and the heating system works at minimum.
KPI(s)	kWh of energy saved
Energy-related SDG(s)	SDG 12 - Responsible Consumption and Production;
Other SDG(s)	SDG 11 - Sustainable Cities and Communities;
Impact on	The institution, students, and teaching staff
Resources	

Good Practice 17

Name	Usage of Economical Light Sources
Country and Region	Romania, Resita
Position of author in HEI	Staff
Origin	Self-initiative
Related sector(s)	Energy Consumption
Description	We started using economical light sources, for a more responsible consumption and in order to save energy. Also, we are careful to turn off the electronic equipment before leaving the rooms
KPI(s)	kWh of energy saved
Energy-related SDG(s)	SDG 12 - Responsible Consumption and Production;
Other SDG(s)	
Impact on	Students and teaching staff
Resources	

Good Practice 18

Name	Change of Compressor Unit
Country and Region	Austria, Vorarlberg
Position of author in HEI	Management Staff
Origin	Self-initiative
Related sector(s)	Energy consumption; Infrastructure
Description	FHV has a compressor station for compressed air in the labs. The old compressor unit was far too large which was seen by analysis of the load data. The degree utilization was just 2%. With the installation of a smaller unit, the energy consumption could be reduced by 50% (from roughly 120000 kWh to 60000 kWh per year).
KPI(s)	kWh of energy saved
Energy-related SDG(s)	SDG 12 - Responsible Consumption and Production SDG 9 - Industry, Innovation and Infrastructure;
Other SDG(s)	
Impact on	Especially management due to reduced costs
Resources	

Good Practice 19

Name	Electric car for business trips
Country and Region	Austria, Vorarlberg
Position of author in HEI	Management Staff
Origin	Self-initiative
Related sector(s)	Mobility and transport;
Description	FHV always had an own fossil fuelled car for business trips. That was exchanged by an electric car. The leasing rate is 650 € per year, we can use our own PV to load the car; we drive about 6500 km per year with the car.
KPI(s)	CO_2 emissions are at least 50% less
Energy-related SDG(s)	SDG 9 - Industry, Innovation and Infrastructure;
Other SDG(s)	
Impact on	Staff
Resources	

Good Practice 20

Name	General Moblitiy Concept
Country and Region	Austria, Vorarlberg
Position of author in HEI	Management Staff
Origin	Self-initiative
Related sector(s)	Mobility and transport
Description	We will have charging stations, the parking slots for bicycles are extended, we have a business bicycle and we have a climate ticket to lend
KPI(s)	General awareness
Energy-related SDG(s)	SDG 9 - Industry, Innovation and Infrastructure
Other SDG(s)	SDG 11 - Sustainable Cities and Communities
Impact on	All staff
Resources	

Good Practice 21

Name	Ground heating system
Country and Region	Austria, Vorarlberg
Position of author in HEI	Management Staff
Origin	Self-initiative
Related sector(s)	Energy consumption; Infrastructure
Description	FHV installs a ground heating system based on a heat pump that can be operated in heating and in cooling mode. Therefore, less fossil fuels are used.
KPI(s)	Reduced CO_2 emissions, reduced costs
Energy-related SDG(s)	SDG 9 - Industry, Innovation and Infrastructure
Other SDG(s)	
Impact on	All students, staff and visitors of FHV due to high comfort (cooling in summer); CEO cause of reduced costs.
Resources	

Good Practice 22

Name	Energy Efficiency
Country and Region	Romania, Timisoara
Position of author in HEI	Management Staff
Origin	Project funding
Related sector(s)	Energy consumption
Description	Regarding the energy efficiency concerns, as a main action for the moment at Timishoara Politehnica University applied for a grant to obtain financing from European funds for the installation of photovoltaic solar panels on several of its own buildings (UPT owns around 100 buildings). The project is in the evaluation phase.
KPI(s)	kWh of energy saved
Energy-related SDG(s)	SDG 7 - Affordable and Clean Energy SDG 9 - Industry, Innovation and Infrastructure;
Other SDG(s)	SDG 4 - Quality Education SDG 11 - Sustainable Cities and Communities;
Impact on	The Timishoara Politehnica University.
Resources	

Good Practice 23

Name	Next Big Change Competition (NBC)
Country and Region	Ireland, Cork
Position of author in HEI	Staff
Origin	Project funding
Related sector(s)	Energy consumption; Water consumption; Mobility and transport; Greening of teaching and learning environment; Infrastructure; Food/meals; Materials and equipment; Cleaning services; Assessing and reporting; Organisational management / institutional governance;
Description	The purpose of the NBC competition is to inspire students to think about the next big idea which will improve individuals, communities, the environment, the region and/or the world! This idea could, for example be a new or significantly improved 1) technology, 2) product 3) service, or 4) marketing campaign and should address at least one of the United Nations Sustainable Development Goals. Applicants simply filled out a simple form, describing their idea and who/what it will benefit. Finalists were chosen from all entries. Finalists had the opportunity to design a poster representing their Next Big Change idea, which was showcased at MTU's Innovation & Enterprise Month gala event.
KPI(s)	It is measured in terms of applicants that apply to the competition. This means that we have clearly communicated what sustainability is, how ideas link with the SDGs, give clarity on what social enterprise is and how the ideas that can make positive impacts on people and communities.
Energy-related SDG(s)	SDG 9 - Industry, Innovation and Infrastructure SDG 12 - Responsible Consumption and Production;
Other SDG(s)	SDG 4 - Quality Education SDG 11 - Sustainable Cities and Communities SDG 16 - Peace, Justice and strong Institutions SDG 17 - Partnership for the Goals;

Impact on	Students
Resources	https://hincks.mtu.ie/next-big-change

Good Practice 24

Name	Change By Degrees
Country and Region	Ireland, Cork
Position of author in HEI	Staff
Origin	Self-initiative
Related sector(s)	Greening of teaching and learning environment: Food/meals; Assessing and reporting; Organisational management / institutional governance;
Description	Change by degrees is an online e-learning programme which has been developed by https://changebydegrees.com/, an organisation helping larger organisations (e.g. Irish HEIs) to understand the SDGs and how their own sustainability ambitions best align to this international framework, using a range of specially designed resources including our SDG 10 Point Plan. They have developed a 10-unit e-learning programme which has been available to MTU (and a wide range of other HEIs) to be integrated into their existing VLEs (Virtual Learning Environments) and which is in the process of being rolled out to all staff and students. The focus areas for the e-learning programme include information about the climate crisis, caring for nature, conscious consumption, sustainable transport, the circular economy, moving to renewable energy, food sustainability and wellbeing and sustainability
KPI(s)	
Energy-related SDG(s)	SDG 6 - Clean Water and Sanitation SDG 9 - Industry, Innovation and Infrastructure SDG 12 - Responsible Consumption and Production SDG 13 - Climate Action SDG 7 - Affordable and Clean Energy;
Other SDG(s)	SDG 4 - Quality Education SDG 11 - Sustainable Cities and Communities;
Impact on	Primarily staff and students in MTU
Resources	https://changebydegrees.com/

Good Practice 25

Name	MTU Green Campus
Country and Region	Ireland, Cork
Position of author in HEI	Management Staff
Origin	Self-initiative
Related sector(s)	Energy consumption; Water consumption; Mobility and transport;Greening of teaching and learning environment; Infrastructure; Food/meals; Materials and equipment; Assessing and reporting; Organisational management / institutional governance; Biodiversity and Waste;
Description	Green Campus is a strategy with various initiatives to identify, advance and promote the Green Agenda on campus. Currently Green Campus tackles 5 main sustainable pillars and achievements to date through various activities on campus 1) Energy 2) Transport 3) Water 4) Waste 5) Bio-diversity As part of these pillars below are some of the ongoing campus-wide projects that are happening: 1) Green Procurement 2) Energy & Green Efficient design in all MTU projects. 3) Training the Team. Measurement & Verification 4) Energy Audits 5) Energy Monitoring / Usage & Control 6) Achieving the Global Energy Standard ISO50001 for the Combined MTU 7) Continuing Energy / Green Environmental Awareness Campaign Recently Green Campus has introduced a training and education program for staff to undertake and gain a digital badge. The training program is called Sustainability 101 and is designed to help enhance HEI staff skills and knowledge on climate change and sustainability. The course consists of 10 units: 1) Introduction 2) Tackling the Climate Crisis

	3) Caring for Nature 4) Playing your Part 5) Conscious Consumption 6) Embracing the Circular Economy 7) Stepping Up for Sustainable Transport 8) Switching to Renewables 9) Food Sustainability with GIY 10) Your Wellbeing and Sustainability
KPI(s)	• CO_2 emissions in kg CO_2 / year • Energy consumption in kWh/year • Water consumption in m^3 per (student and) year • Waste in kg per year
Energy-related SDG(s)	SDG 12 - Responsible Consumption and Production SDG 13 - Climate Action SDG 9 - Industry, Innovation and Infrastructure SDG 7 - Affordable and Clean Energy;
Other SDG(s)	SDG 3 - Good Health and Well-Being SDG 4 - Quality Education SDG 8 - Decent Work and Economic Growth SDG 11 - Sustainable Cities and Communities SDG 15 - Life on Land SDG 16 - Peace, Justice and strong Institutions SDG 17 - Partnership for the Goals;
Impact on	Students, Staff, Management
Resources	https://www.mtugreencampus.ie/

Good Practice 26

Name	Job ticket
Country and Region	Austria, Vorarlberg
Position of author in HEI	Staff
Origin	Self-initiative
Related sector(s)	Mobility and transport
Description	To encourage the use of public transport, FHV covers the cost of an annual ticket for public transport in the province of Vorarlberg. The ticket is valid for the journey to work and can also be used for private journeys. Employees who are not sure whether the ticket is useful for them can test the option and travel free of charge for two weeks with a trial ticket provided by the employer.
KPI(s)	
Energy-related SDG(s)	SDG 13 - Climate Action
Other SDG(s)	SDG 11 - Sustainable Cities and Communities
Impact on	Employees are eligible if they are employed at least 30 % at the HEI, have an employment contract that is valid for at least 12 months and use the ticket for business travel and for journeys to and from work as far as possible.
Resources	https://www.vmobil.at/tickets/vmobil-jobticket

Good Practice 27

Name	Staff Awareness Day
Country and Region	Ireland, Cork
Position of author in HEI	Staff
Origin	Self-initiative
Related sector(s)	Energy consumption; Water consumption; Greening of teaching and learning environment;
Description	I was part of the Energy Team that organised an Energy Awareness Day on campus a number of year ago (2015!). It was held on the main corridor, we had various stands explaining ways on how to save energy, awareness around energy consumption for every day items. We had a Watt challenge, interactive tool used to promote the Energy Awareness Day. Participants are made aware of how much electricity some of their appliances and different bulbs use. The Watt Challenge was powered by two bicycles connected to DC generators which are connected to monitors via the software. Participants got an opportunity to generate their own electricity. Participants see firsthand how hard it is to generate electricity and they get a better understanding why it is so important to conserve it. We also had 'energy tours', presentations and other activities throughout the day.
KPI(s)	We partnered with the OPW (Optimising at Work) campaign and over a number of years succeeded in reducing the energy consumption on campus and the Awareness Day helped with this. Difficult to put an actual number of what % of savings were attributed to this actual day.
Energy-related SDG(s)	SDG 13 - Climate Action SDG 7 - Affordable and Clean Energy;
Other SDG(s)	SDG 4 - Quality Education
Impact on	Staff and students
Resources	

Good Practice 28

Name	Ecological Footprint Calculator
Country and Region	Portugal, Aveiro
Position of author in HEI	Management Staff
Origin	Adopted after project funding development
Related sector(s)	Energy consumption; Mobility and transport; Food/meals; Water consumption
Description	Gathering and monitoring the indicators for the use of the Ecological Footprint Calculator, which will support Governance decision-making. "University Footprint Calculator", offers HEI a tool that allows academic community to better understand natural resources management. Through simple metrics, actionable insights and analytical reports, sustainability is shown from a different approach to guide informed decisions. In this context, the University of Aveiro (UAveiro) is adopting the "Calculator of the Ecological Footprint of Universities" developed within the scope of the EUSTEPS European project, of which UAveiro was a partner. This project, in addition to the educational component, aimed at students and the academic community in general, developed a methodology to assess and support the reduction of the environmental impact of Higher Education Institutions. The calculation of the Ecological Footprint of HEI based on their consumption of natural resources and use of ecosystem services will allow a better identification of areas of intervention to reduce the environmental impact of HEI's actions. Also, these are some benefits of calculating the Ecological Footprint: • assessment and monitoring of ecological performance (natural resources and services); • identify the greatest impact and define intervention areas to reduce the environmental impact in institutional management;

	• interactive tool to support analysis and raise awareness of the academic community. Framed in the concept of Sustainability and Intergenerational Justice, UAveiro has implemented the University Footprint Calculator that enables "to think and anticipate realities" towards carbon neutrality without compromising future generations.
KPI(s)	Standard indicators (e.g. energy consumption reduced, water consumption reduced, number of meals, number of buildings with photovoltaic panels, reduction in fuel consumption)
Energy-related SDG(s)	SDG 12 - Responsible Consumption and Production SDG 13 - Climate Action
Other SDG(s)	SDG 4 - Quality Education SDG 3 - Good Health and Well-Being SDG 17 - Partnership for the Goals;
Impact on	Entire University Community
Resources	https://www.eusteps.eu/resources/university-footprint-calculator/

Good Practice Template to be used for further good practice examples

Name	
Country and Region	
Position of author in HEI	
Origin	
Related sector(s)	
Description	
KPI(s)	
Energy-related SDG(s)	
Other SDG(s)	
Impact on	
Resources	