E³UDRES²

Sustainability Guide

Practical guidelines for aligning the activities of the E³UDRES² European University Alliance with the European Green Deal

Contents

Authors of this guide

→ Ramona MAUTHNER, St. Pölten UAS (Austria)

→ Pauliina UUSI-PENTTILÄ, Jamk UAS (Finland)

→ Wenda HANS, Saxion UAS (Netherlands)

→ Max NAB, Saxion UAS (Netherlands)

→ Michael MAI, Fulda University of Applied Sciences (Germany)

→ Agita LĪVIŅA, Vidzeme University of Applied Sciences (Latvia)

→ Lena FOCKERS, Fulda UAS (Germany)

→ Clarissa PLENDL, Fulda UAS (Germany)

1.   Summary

The E³UDRES² Sustainability Guide aims to provide recommendations on how to align the activities and processes of the E³UDRES² European University Alliance with the goals of the European Green Deal. It shows which actions E³UDRES² as an alliance already takes in terms of sustainable practices, where there is still room for improvement, and which actions can be taken to meet sustainability goals.

The main components of the guide include:

→ Summary on the status of the climate crisis and main emission factors
→ Overview of current sustainability efforts of E³UDRES² as an alliance
→ Prospective sustainability goals for E³UDRES²
→ Practical recommendations for sustainability advances

Europe as a continent is warming twice as fast as the global average, leading to an increasing number of extreme weather events. The European Green Deal aims for climate neutrality by 2050, with a 55% emission reduction by 2030. In order to achieve this goal, contributions from all sectors are necessary. Being committed to "Smart and Sustainable Regions", the E³UDRES² Alliance bears as special responsibility to contribute to the limiting of global warming.

In order to achieve the reduction of harmful greenhouse gas emissions and contribute to a liveable planet, the authors of this guide advocate for the implementation of the following main principles within the alliance, among others:

→ **A reduction of air travel, shifting to more sustainable transportation policies**

→ **Promotion of plant-based catering at E³UDRES² events**

→ **Utilising E³UDRES² networks for demanding policy change in support of sustainable development**

→ **Incorporating sustainability aspects into student-centered E³UDRES² events, contributing to awareness-raising**

→ **Regularly monitoring and improving E³UDRES²-related carbon footprints per institution, creating a balance sheet for the E³UDRES² alliance as a whole**

2.   Background & Introduction

2.1   A shared responsibility across Europe

The E³UDRES² European University Alliance, uniting nine higher education institutions across Europe, comprises a community of more than 100.000 students and 10.000 staff members. The alliance, whose full name reads "Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions", commits itself to the following statement in its long-term vision and mission document:

> *We inspire open-minded people to co-create solutions for **environmental, societal and economic challenges**, support individual learners to unleash their talents and develop future-oriented skills, empower creative Ent-r-e-novators (entrepreneurs, researchers, educators and innovators) and act as an inclusive and engaged platform for collaborative innovation that strengthens a **smart and sustainable society**.*
>
> -   E³UDRES² Long-Term Vision & Mission Statement (Updated Version), January 2023[1]

The roles of higher education institutions are often described in three missions: Providing quality education, conducting research, and, as a third mission, providing and utilizing scientific findings to deal with a wide range of social challenges. The institutions within E³UDRES² have not only committed themselves to jointly developing "Smart and Sustainable Regions", but they also bear a responsibility as educational institutions to align their actions with current scientific findings and recommendations. Additionally, the risk of being perceived as an alliance that uses greenwashing, which means misleading target groups to believe an organisation is doing more to protect the environment than it is, only to meet current popular demand, is a threat the alliance must counter together with profound, strategic action. This guide aims to support the responsible actors in the E³UDRES² Alliance to implement sustainability considerations in a variety of aspects of the work of the alliance.

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[1] https://eudres.eu/assets/files/eudres_2.0_vision_mission_statement.pdf

2.2 Living Through the Climate Crisis

When the preparation of this guide began in 2024, humanity lived through the hottest year on record since 1850.[2] The cause of this dangerous - and still accelerating - rapid warming, as underlined by leading scientists worldwide, is the human-made, large-scale burning of fossil fuels since the Industrial Revolution.

> *Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850-1900 in 2011-2020. Global greenhouse gas emissions have continued to increase, with unequal historical and ongoing contributions arising from unsustainable energy use, land use and land-use change, lifestyles and patterns of consumption and production across regions, between and within countries, and among individuals (high confidence).*
>
> \- CLIMATE CHANGE 2023 Synthesis Report, Summary for Policymakers[3]

Since the 1980s, Europe has been warming twice as fast as the global average, becoming the fastest warming continent on Earth.[4] In the years to come, the human-made climate crisis will lead to a drastic increase in flood events, heatwaves, hailstorms, and various further natural disasters of unprecedented severity. Connected to an unpredictable climate, societies will face issues with food and water availability and safety, a multitude of health problems, psychological stress, the advent of new diseases, as well as agonizing personal losses due to disasters striking. Additionally, many individuals globally will be forced to flee their homes in consequence of the worsening climatic circumstances they are facing.

> *Extreme weather events like storms, heatwaves and flooding accounted for 85,000 to 145,000 human fatalities across Europe, over the past 40 years. Over 85% of those fatalities were due to heatwaves. Economic losses from weather and climate-related extremes in Europe reached around half a trillion euros over the same period.*
>
> \- Climate change impacts, risks and adaptation, European Environment Agency[5]

Next to this impact, the climate crisis of course does not only affect human lives: At present, the planet is experiencing a mass extinction event.[6] Plant and animal species are endangered due to extreme rainfalls, periods of drought, and other dangers for example coming from heat stress and worsening air quality. The variation of plant and animal species is of great importance for our quality of life, as well as for food supply. It is therefore an immensely important task to respond to the climate crisis while preserving and restoring also biodiversity, which is also essential for the success of the climate goals.

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[2] https://www.nasa.gov/news-release/temperatures-rising-nasa-confirms-2024-warmest-year-on-record/
[3] https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf
[4] https://climate.copernicus.eu/sites/default/files/custom-uploads/ESOTC%202023/Summary_ESOTC2023.pdf
[5] https://www.eea.europa.eu/en/topics/in-depth/climate-change-impacts-risks-and-adaptation
[6] https://www.worldwildlife.org/stories/what-is-the-sixth-mass-extinction-and-what-can-we-do-about-it

A rich biodiversity is essential for us as humans because of food, good air quality, but also in order to produce essential products or medicines. Currently, approximately one million animal and plant species are under threat of extinction - a record-high number of species under threat.[7]

In order to curb emissions and limit further warming as much as possible, leading at least to a slowing of disaster severity, efforts from all sectors are needed. Higher education institutions (HEIs), and E³UDRES² as a network of HEIs, bear a responsibility as educational institutions to align their actions with scientific recommendations. Especially due to E³UDRES² being an EU-funded initiative, the E³UDRES² Alliance should strive to act in line with the goals the EU is working towards. In 2019, the European Union has bundled its core goals in terms of fighting the climate crisis and improving sustainability efforts in a new flagship initiative - the European Green Deal.

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[7] https://earth.org/un-reports-animal-species-extinction-rates-are-record-high-and-accelerating/

St. Pölten, Austria | 2024
St. Pölten and its surrounding villages were hit by an extreme flood in September 2024. The E³UDRES² Intensive I Living Labs had to be switched to an online setting last minute to keep all participants safe. It was the third century flood in a period of 20 years.
Picture: orf.at

2.3 Regulations of the European Green Deal

The worsening of the climate crisis has led to the creation and implementation of the European Green Deal. This policy, first presented in 2019, represents the European Commission's roadmap to making the European Union climate neutral by the year 2050. It is built on three leading principles[8]:

no net emissions of greenhouse gases by 2050	**economic growth decoupled from resources**	**no person and no place left behind**

The intermediate goal of the Green Deal is to produce at least 55% less net greenhouse gas emissions already by 2030, compared to 1990 levels. As a package of individual initiatives, the Green Deal comprises the following activities:

→ **Fit for 55 package**
Aiming to turn climate ambitions set in the Green Deal into actual law.

→ **European climate law**
Making it a legal obligation for the EU to reach climate neutrality by 2050.

→ **EU strategy on adaptation to climate change**
A strategy paper that outlines a climate-resilient society that is fully adapted to the unavoidable impacts of climate change by 2050.

→ **EU biodiversity strategy for 2030**
Aiming to recover Europe's biodiversity by 2030.

→ **Farm to fork strategy**
Remodelling the current EU food system towards a more sustainable one.

→ **European industrial strategy**
Industry as a means to accelerate and enable change, innovation and growth.

→ **A new Circular economy action plan**
Decoupling economic growth from resource use and shifting to circular systems in production and consumption. [9]

While the Green Deal provides the legal framework and roadmap the EU is now working towards, directly influencing all individuals and organisations living and operating within the European Union, it is noteworthy that organisations such as Greenpeace view the ambitions of the Green Deal merely as a step in the right direction. They report that "the proposed climate targets don't

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[8] https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en
[9] https://www.consilium.europa.eu/en/policies/green-deal/

match what science requires"[10], highlighting the need for even faster and more substantial action than what the Green Deal demands.

In addition to the European Green Deal, there is a variety of further global and national sustainability agreements and targets the E³UDRES² countries are bound to. One global example is the Paris Agreement, in which 196 Parties agreed to as a legally binding international treaty on climate change. This agreement vows to substantially reduce global greenhouse gas emissions to hold global temperature increase to well below 2°C above pre-industrial levels and pursue efforts to limit it to 1.5°C above pre-industrial levels.[11] In addition, all E³UDRES² institutions have committed themselves to the UN Sustainable Development Goals[12], which also feature themes such as climate action, responsible consumption, and protection of biodiversity.

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[10] https://www.greenpeace.org/eu-unit/issues/climate-energy/2517/european-green-deal-misses-the-mark/
[11] https://www.un.org/en/climatechange/paris-agreement
[12] https://sdgs.un.org/goals
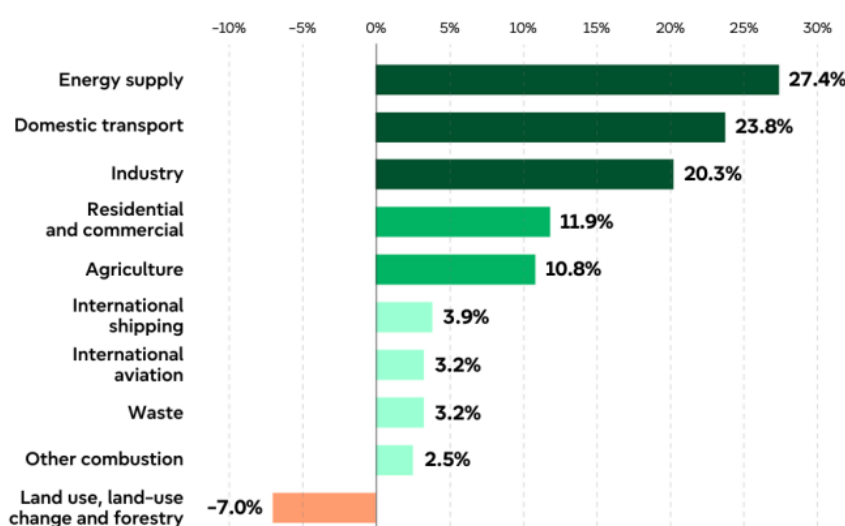
Co-funded by
the European Union

2.4 Main drivers of CO$_2$ Emissions in Europe

In the year 2023, the 27 member countries of the European Union together were the world's fourth largest emitter of greenhouse gases.[13] According to the *Greenhouse gas emissions by country and sector document* issued by the European Parliament, the sectors with the top emissions in Europe are energy supply, domestic transport and industry.[14]

Greenhouse gas emissions in the EU by sector
share of total emissions estimated in CO2 equivalent (2022)

Sector	Share
Energy supply	27.4%
Domestic transport	23.8%
Industry	20.3%
Residential and commercial	11.9%
Agriculture	10.8%
International shipping	3.9%
International aviation	3.2%
Waste	3.2%
Other combustion	2.5%
Land use, land-use change and forestry	-7.0%

Source: European Environment Agency

European Parliament

E³UDRES² and its member institutions can directly take action especially in the two biggest fields of emissions: Energy supply and domestic transport. Sectors such as international aviation and waste also are fields E³UDRES² can strive to make a difference in. It is worth noting that in the EU27, all sectors experienced a decrease in their greenhouse gas emissions in 2023 compared to 2022. The largest relative drop was observed in the power industry sector, in which emissions decreased by 20.1%.[15] Despite these developments, emissions are not dropping strongly and rapidly enough to meet the trajectory the EU needs to follow in order to meet its goals set in the Green Deal, as shown in the 2024 EU Climate Action Progress Report.[16]

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[13] https://edgar.jrc.ec.europa.eu/report_2024#emissions_table)
[14] https://www.europarl.europa.eu/pdfs/news/expert/2018/3/story/20180301STO98928/20180301STO98928_en.pdf
[15] https://publications.jrc.ec.europa.eu/repository/handle/JRC138862
[16] https://climate.ec.europa.eu/eu-action/climate-strategies-targets/progress-climate-action_en
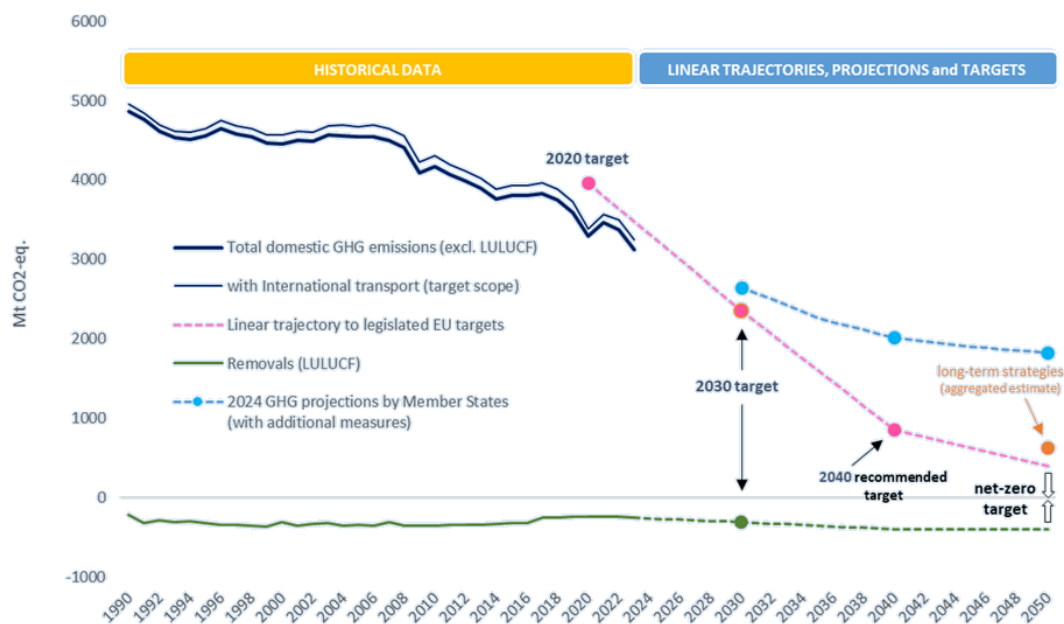
Tackling the climate crisis is a group task – it requires all countries, businesses and individuals to contribute to the joint goal. Nevertheless, it is worth being informed about the emission shares of different European countries. The graph below shows the sum of greenhouse gas emissions per EU country in 2023: [17]

Total greenhouse gas emissions per EU country (2023)
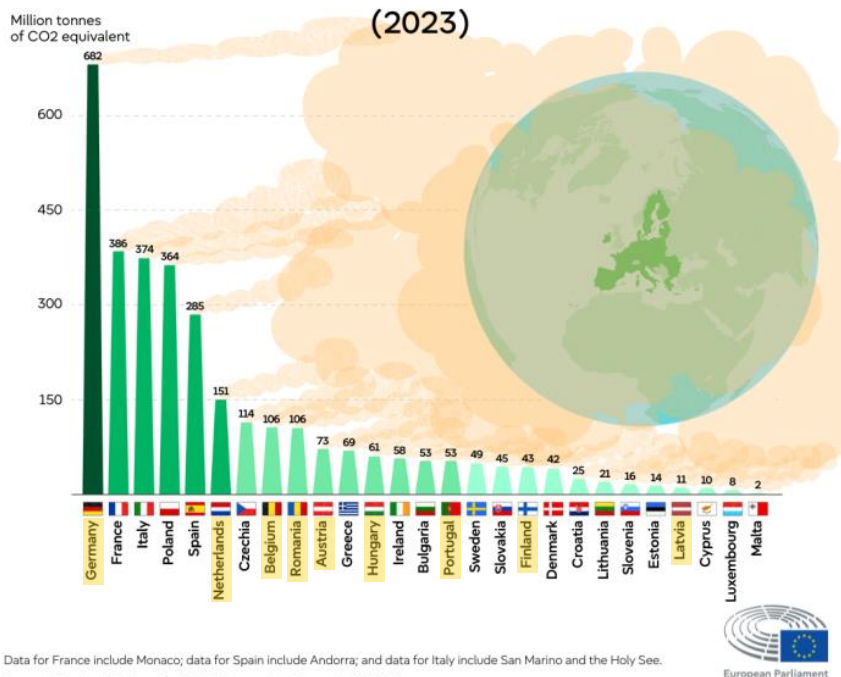
Data for France include Monaco; data for Spain include Andorra; and data for Italy include San Marino and the Holy See.

Source: Emissions Database for Global Atmospheric Research (EDGAR)

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[17] https://www.europarl.europa.eu/pdfs/news/expert/2018/3/story/20180301STO98928/20180301STO98928_en.pdf

E³UDRES²
Engaged and Entrepreneurial European University as
Driver for European Smart and Sustainable Regions

2.5 Scope of Action of this Guide

The E³UDRES² Sustainability Guide focuses on the E³UDRES² alliance as such, not on individual institutions. It aims to provide recommendations on which actions the alliance could take in order to act in line with the European Green Deal and contribute to a limiting of global warming. While some recommendations of this guide might be of interest for individual higher education institutions as well, the focus of this document lies on the actions E³UDRES² as a network may take. The decision concerning implementation, prioritization and feasibility of the suggested actions lies within the responsible E³UDRES² boards.

The core activities of E³UDRES² as an alliance relate in particular to the following areas, defining the alliance's sphere of influence:

Student & staff mobility	**Collaborative and international teaching and research**	**Knowledge-sharing and networking on an international level**
Sharing best-practices and implementing initiatives across institutions	**Supporting regional development by solving regional challenges in student events**	

Palmela, Portugal | 2022
A wildfire in the municipality of Palmela, part of the Setúbal District, burned down 400 hectares (990 acres) of bush and caused 12 injuries in 2022. Wildfires in Portugal occur every summer and are increasing in severity.
Picture: semmais.pt

3. Current Sustainability Initiatives within E³UDRES²

As of February 2025, the E³UDRES² Alliance lacks strategic sustainability efforts that span over the alliance as a whole. Nevertheless, there are some individual good examples in which sustainability does already play a role. This includes for example:

→ **Financial incentives for "green travel" when organising Blended Intensive Programmes (BIPs) and Erasmus+ Mobilities**
Many E³UDRES² events and activities are organized via the framework of Blended Intensive Programmes (BIPs). While this option was not directly developed by E³UDRES², the alliance advertises this possibility to encourage participants to use more sustainable means of transport when travelling to activities. The use of these programmes for funding means that participants receive extra budget in case they choose not to travel by plane, but by more sustainable mobility options, like buses or trains.

→ **Sustainability as a theme in challenge-based E³UDRES² formats**
Some E³UDRES² formats, like I Living Labs or Bootcamps, include sustainability topics (emission reduction, acting in line with Sustainable Development Goals, circular economy, etc.) in the challenges the student teams set out to solve. Through this, E³UDRES² can make an impact in both students and participating staffs' awareness and possibly shape processes of organisations in case the proposed solutions get implemented.

> **EXAMPLE**
>
> *The E³UDRES² Bootcamp 2023 was themed "Future Food". Challenges to solve by the student teams, together with local businesses, included "Creating an artificial intelligence app for reducing food waste" or "Designing a sustainability score for products to help consumers make better choices".[18] While participation in the event raised awareness for sustainability topics among participants, the suggested solutions were not implemented by the companies providing the challenges.*

→ **Minimizing food waste**
Participants of E³UDRES² events of course require catering. Food waste is a factor the alliance aims to impact: At most E³UDRES² events, buffets and self-ordered meals enable guests to consciously choose which food they would like to get (and will likely eat), keeping food waste as low as possible. Different institutions within the alliance also have regulations in place to further combat food waste.

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[18] https://eudres.eu/news/future-food-students-explored-food-related-challenges-in-this-years-eudres-bootcamp-2023-future-food

→ **E³UDRES² Research Centers of Excellence**

E³UDRES² researchers are collaborating in various Prospective Applied Research Centers of Excellence, with many incorporating sustainability aspects in their work. An overview of existing Research Centers is available [here](#).

→ **Merchandise & printed info material**

Some E³UDRES² institutions already opt for environmentally friendly options when ordering merchandise, for example by using recycled paper for flyers (or going digital completely). The E³UDRES² Subgroup in Work Package 10 (Interaction, Impact and Dissemination) working on merchandise and design tasks for the alliance aims to opt for merchandise products that cause little or no damage to the environment (pollution, waste, water consumption, using green energy etc.), as well as products that produce as little as possible CO_2 emissions (sustainable materials, short shipping distances, etc).

At events, some E³UDRES² institutions allow for participants to return nametag sleeves and lanyards to be reused in next events. Goodie bags are only filled with essentials, add-on goodies are put on display for guests to take them if they feel like they will really use them. This way, the aim is to reduce the number of goodies thrown away because participants don't find them useful.

4. Prospective Sustainability Ambitions within E³UDRES²

This chapter shows in which areas E³UDRES² has a potential to improve its sustainability efforts to contribute to the goals set in the Green Deal. The measures are rated for difficulty and impact by personal assumptions of the authors. For the E³UDRES² consortium, the actionable Green Deal objectives include avoiding and reducing CO_2 emissions, embedding sustainability considerations in planning and development, mainstreaming circular economy principles, and taking socially responsible actions.

4.1 Travels & In-Person Meetings/Conferences (Staff)

At present, physical mobility across Europe is a fundamental cornerstone of the activities E³UDRES² is hosting and attending. Regular internal events, like General Assemblies and on-site work package meetings, come with a high quantity of individuals (ranging up to 200 persons) travelling across Europe at least twice a year, often per airplane. While real-life meetings and interactions are fundamental to the progress and cohesion of the alliance, they constitute the biggest share of emissions produced by the activities of the alliance. Currently, there mostly are no limits to travelling except budget.

In addition to these meetings and events, some E³UDRES² members fulfil a multitude of representative tasks, presenting the alliance at networking events and conferences in locations around Europe and beyond. In order to keep emissions as low as possible - and furthermore contribute to keeping the number of natural disasters due to the climate crisis as low as possible – it is necessary to re-evaluate the urgency and number of in-person meetings and travels. With some E³UDRES² members travelling to and from Brussels sometimes multiple times per month using air travel, this takes a heavy toll on the emissions balance of the alliance, and creates a further contribution to minimizing the chance of a liveable planet for future generations (as well as our students).
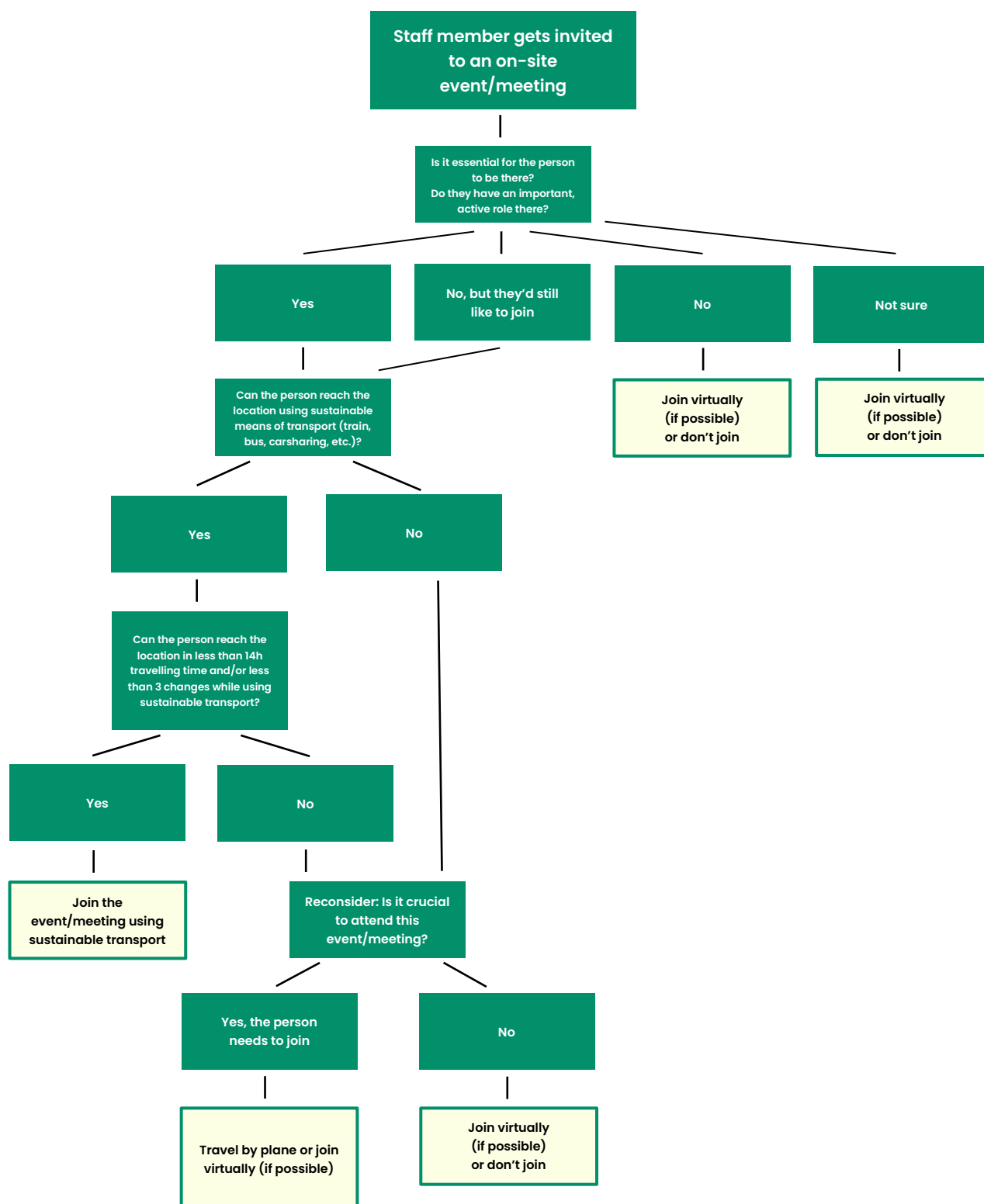
Measures to meet our ambitions

The authors suggest a framework on how to make individual decisions for travel. The main questions to ask before going on a business trip are:

Is this business trip absolutely necessary?

Under which conditions do we use which means of transport (sustainable transport vs. plane)?

In order to facilitate easier decision-making, the following decision tree may help to come to a structured conclusion:

Decision tree for E³UDRES² Staff Travels

```
                    ┌──────────────────────────────┐
                    │   Staff member gets invited   │
                    │         to an on-site         │
                    │        event/meeting          │
                    └──────────────────────────────┘
                                   │
                    ┌──────────────────────────────┐
                    │  Is it essential for the person│
                    │          to be there?          │
                    │   Do they have an important,   │
                    │        active role there?      │
                    └──────────────────────────────┘
```

Staff member gets invited to an on-site event/meeting

Is it essential for the person to be there? Do they have an important, active role there?

- **Yes**
- **No, but they'd still like to join**
- **No**
  - Join virtually (if possible) or don't join
- **Not sure**
  - Join virtually (if possible) or don't join

Can the person reach the location using sustainable means of transport (train, bus, carsharing, etc.)?

- **Yes**
  - **Can the person reach the location in less than 14h travelling time and/or less than 3 changes while using sustainable transport?**
    - **Yes**
      - Join the event/meeting using sustainable transport
    - **No**
      - **Reconsider: Is it crucial to attend this event/meeting?**
        - **Yes, the person needs to join**
          - Travel by plane or join virtually (if possible)
        - **No**
          - Join virtually (if possible) or don't join
- **No**
  - **Reconsider: Is it crucial to attend this event/meeting?**

Additionally, the alliance's commitment could be further underlined by imposing self-restrictions, like for example not to travel per plane for distances below 1.000km (as proposed in a campaign by *Scientists For Future*)[19]. This would, for example, apply to routes like Vienna – Fulda (696km by road). It is worth noting that not all E³UDRES² partners can use train or bus connections equally due to their geographic location and infrastructure limitations. The aim for E³UDRES² as an alliance may then be to try to reduce the number of flights by a set percentage in a specific timeframe, or, formulated differently, raise the number of sustainable travels made by a certain percentage. The emissions of E³UDRES²-related flights can be tracked using tools such as the *flyingless.de* greenhouse gas calculator (German).[20]

Prerequisites for enabling sustainable travel

→ **Virtual meetings**: Depending on the event, it is recommended the alliance moves away from the expectation that representatives of all partner institution must be available on-site. While hybrid meetings do have limitations in terms of engagement and community building, they are a valid alternative when it comes to emission reduction. It is recommended to offer at least selected parts of each event/meeting online.

→ **Extended preparation time**: Announcing E³UDRES² events and meetings at least two months before they are set to take place, including a draft programme and approximate times, allows for the necessary time in travel planning. This would aid in enabling individuals to make use of lower prices in buying tickets for sustainable mobility options.

→ **Mindful regulations in E³UDRES²**: Lifting regulations that put pressure on individuals to join on-site meetings can help in reducing the number of travel-related emissions. For example, at E³UDRES² General Assemblies, the full E³UDRES² Head Office team is expected to join, no matter their contribution to the programme of the event.

→ **Advocate for changing institutional regulations:** E³UDRES² can be a driver to advocate for the recognition of longer travel times connected to sustainable modes of transportation. Rigid business travel regulations and a lack of recognition of travel time are often the most significant obstacles to choosing sustainable means of transport.

→ **Meeting in the middle**: If sustainable travel connections are bad for many participants when planning an on-site meeting, the organisers may consider finding a more central location that most participants can reach by train.

→ **Active Mobility**: Promote active mobility for short distances on-site. This can for example be done by collecting and displaying options for bike rentals or pointing out the walking distance between the train station and the venue.

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[19] https://unter1000.scientists4future.org/commitment/
[20] https://flyingless.de/thg-rechner

E³UDRES²
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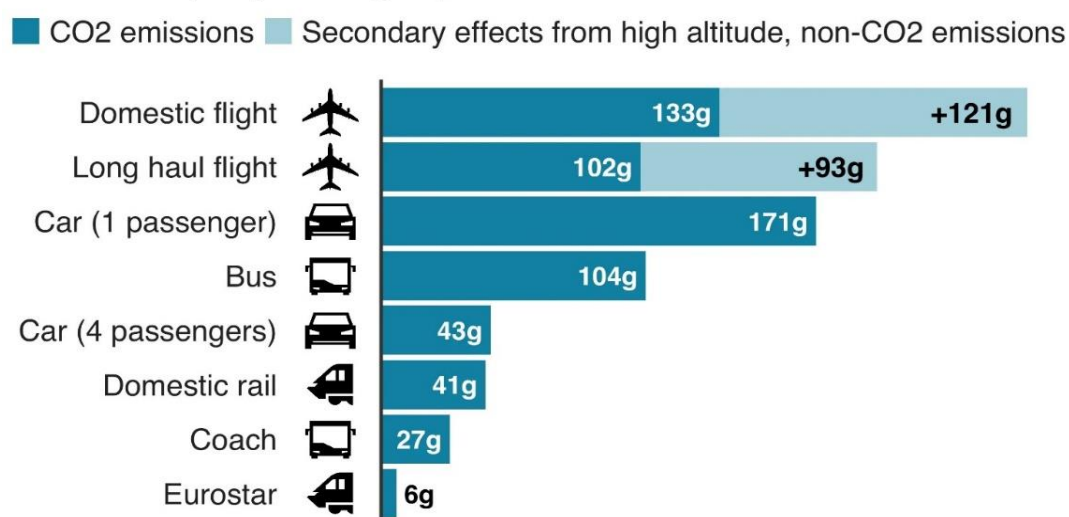Driver for European Smart and Sustainable Regions

→ **Focus on green travel in BIPs**: Advertise green travel more strongly in BIP-funded events. Making participants more aware of the financial and environmental benefits they can benefit from when choosing to travel via train or bus can aid in getting more participants to choose these types of travel.

→ **Consider compensation**: In case sustainable travel modes are no option for a specific travel, compensation payments might be considered by the sending institution.

In order to be able to monitor and improve the E³UDRES² emissions connected to travelling, it is suggested to record travel distances and the resulting greenhouse gas emissions of all E³UDRES²-related travels per institution and analyse them 1-2x per year. This way, we can sensitise our members for the emissions generated per institution. Once an initial balance sheet is available, the partner's goals and measures can be amended annually.

The ambitions of E³UDRES² in terms of travel-related emission reduction could directly contribute to the European Commission's 2020 *Sustainable and Smart Mobility Strategy*[21]. This document outlines key milestones and flagship initiatives for enhancing sustainability of mobility in Europe, such as making collective travel of under 500km carbon neutral within the EU by 2030. The strategy document highlights emission reduction as the most serious challenge the transport sector is facing.

Emissions from different modes of transport
Emissions per passenger per km travelled

■ CO2 emissions ■ Secondary effects from high altitude, non-CO2 emissions

Mode	CO2 emissions	Secondary effects
Domestic flight	133g	+121g
Long haul flight	102g	+93g
Car (1 passenger)	171g	
Bus	104g	
Car (4 passengers)	43g	
Domestic rail	41g	
Coach	27g	
Eurostar	6g	

Note: Car refers to average diesel car
Source: BEIS/Defra Greenhouse Gas Conversion Factors 2019   BBC

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[21] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0789

> ### Evaluation of this measure
>
> Difficulty level: ↑ **High**
> Impact rating: ↑ **High**
>
> **Presumed responsibility for implementation**: Site Coordinators

4.2 Travels & In-Person Events (Students)

Green Travel top-ups in Blended Intensive Programmes are already a measure that is used and displayed within E³UDRES². Nevertheless, there is room for improvement in reinforcing it – green travel options can be communicated as the default for students where sustainable travel modes are feasible (for example for travels between Austria and Romania). Students get rewarded with a higher budget using green travel, and contribute to lowering the emissions of the alliance.

Measures to meet our ambitions

The E³UDRES² Communication Team (WP10) can put a focus on advertising Green Travel top-ups more strongly when promoting E³UDRES² events, also clearly showing the benefits for students. This can be done directly on the E³UDRES² website when activities are promoted, but also on Social Media, for example.

> ### Evaluation of this measure
>
> Difficulty level: ↓ **Low**
> Impact rating: ➔ **Medium**
>
> **Presumed responsibility for implementation**: Event Organizers, BIP Coordinators, WP10 Team

4.3 Sustainable Food Options at E³UDRES² Events

The kind of food consumed in E³UDRES² events is something the alliance partners can directly influence. The production of meat, especially red meat, is responsible for a lot of emissions, as well as land use (additionally, it obviously harms animals). A transition towards choosing protein sources that are more sustainable, available regionally and in season (and ideally plant-based), should be the goal for the alliance. Using seasonal and local products in meals not only reduces emissions but also contributes to regional development.

Measures to meet our ambitions

During E³UDRES² events where catering is provided, it is recommended to shift to more plant-based protein sources. This is possible in a variety of ways and difficulty levels. Depending on the length of the event, different systems could be implemented – for example:

→ <u>Transition Level 1</u>: Offer one vegetarian/vegan option per course
→ <u>Transition Level 2</u>: Offer one day at the event where only vegetarian/vegan options are served
→ <u>Transition Level 3</u>: Offer only vegetarian/vegan options throughout the whole event

In addition, the transport emissions of food should be considered. Local suppliers and short delivery chains are favourable.

The packaging of food is another factor contributing to its emission balance. It is recommended to not use single-use containers for serving meals. If absolutely necessary, opt for recyclable containers. Instead of providing guests with drinks in single-use plastic bottles, various more sustainable options are possible:

→ Offer tap water in a pitcher instead of bottled water
→ Offer drinks in returnable (deposit) glass bottles
→ Encourage participants to bring their own (water) bottles

Emission examples from different diets

In a two-week experiment conducted in 2022, the BBC tracked and compared food-related emissions from a vegan, vegetarian and omnivorous diet.[22] The results were as follows:

Emissions per diet per week in kg
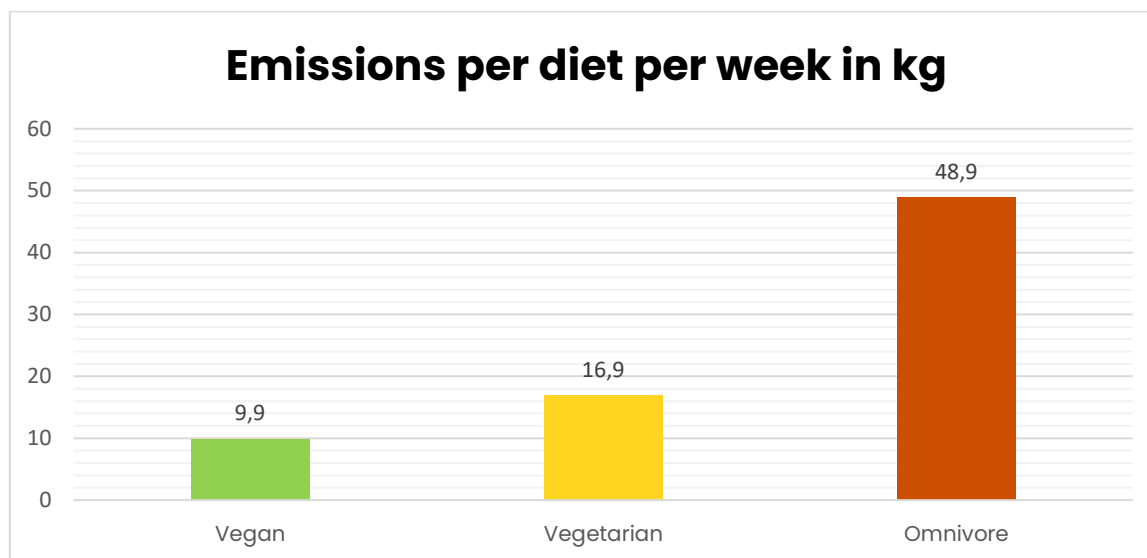
In a study published in *Nature*, it was described that the division of these three groups also corresponds to their impact on land use, water use, eutrophication and biodiversity loss.[23]

EXAMPLE

Transferring these results to a E³UDRES² setting, for example to a one-week E³UDRES² Bootcamp (Sunday – Saturday) with 30 participants, this would result in the following estimated greenhouse gas emissions:

- *If all 30 participants ate vegan food only for the week: 297kg*
- *If all 30 participants ate vegetarian food only for the week: 507kg*
- *If all 30 participants ate all types of food (including animal products) for the week: 1.467kg*

Evaluation of this measure

Difficulty level: ↓ **Low**
Impact rating: → **Medium**

Presumed responsibility for implementation: Event Organizers

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[22] https://www.bbc.com/future/article/20220429-the-climate-benefits-of-veganism-and-vegetarianism
[23] https://www.nature.com/articles/s43016-023-00795-w/tables/4

E³UDRES²
Engaged and Entrepreneurial European University as
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4.4 Serving as a Role Model for Sustainability

With the alliance encompassing more than 100.000 students and 10.000 university staff, it can reach out to many individuals to inspire and raise awareness about sustainability topics. In order to be trustworthy, E³UDRES² understandably needs to adhere to its own regulations and sustainability efforts in order to stay credible. With the term "Smart and Sustainable Regions" in its title, E³UDRES² faces the risk of losing trust of students and stakeholders if the alliance fails to act according to sustainability principles (greenwashing!).

Measures to meet our ambitions

→ Ask all partner institutions for an official commitment to following sustainability practices in E³UDRES²
→ Publish this guide on the E³UDRES² website
→ Make sustainability measures and short, regular progress reports public (for example on the E³UDRES² Website)
→ Feature the sustainability efforts of the alliance and its commitment on E³UDRES² social media channels

Evaluation of this measure

Difficulty level: ↑ **Hard**
Impact rating: → **Medium**

Presumed responsibility for implementation: Executive Board, Work Package 10, Whole alliance

4.5 Utilizing our Network to Promote Systemic Change

E³UDRES², being in close contact with local governments and the European Commission, can use its standing to also demand stronger political action to act on the climate crisis. Many sustainability efforts only become effective if they are adhered to by as many individuals and organisations as possible on the basis of binding guidelines and frameworks. As of 2025, there unfortunately is a dangerous Europe-wide trend to roll back or at least diminish sustainability efforts.

Measures to meet our ambitions

→ Raise awareness among E³UDRES² members taking up representative functions to raise the topic of binding sustainability frameworks in settings like meetings with EU officials, national/regional governments or international conferences

> **Evaluation of this measure**
>
> Difficulty level: ↓ **Low**
> Impact rating: ↑**High**
>
> **Presumed responsibility for implementation**: Alliance members taking up representative functions

4.6 Multiplying Sustainability Efforts Through Students

Through the students E³UDRES² works with, the allinace has the opportunity to multiply sustainability efforts across borders. These multiplication efforts could include for example:

→ Students enforcing sustainability efforts more strongly at their home institutions
→ Students supporting E³UDRES² in diversifying its portfolio of sustainable actions
→ Students motivating other students to join sustainability initiatives, hosted by various organisations
→ Students working on sustainability challenges in E³UDRES² events

Measures to meet our ambitions

→ Encourage students to voice their thoughts and ideas on the topic of sustainability or the climate crisis (also to friends, family etc.)
→ Encourage students to bring in their own ideas within E³UDRES² and their home institutions
→ Encourage students to get active in the field of sustainability and climate protection
→ Publicly highlighting and/or celebrating students' contributions to sustainability or climate research and solutions (for example through a E³UDRES² Award of Excellence)

> **Evaluation of this measure**
>
> Difficulty level: ↓**Low**
> Impact rating: ↑**High**
>
> **Presumed responsibility for implementation**: E³UDRES² members in direct contact with students (event organisers, Educational Entrepreneurs, etc.), Whole alliance

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4.7 Adding Sustainability Aspects to All Challenges in E³UDRES² Events

Most E³UDRES² events are based on local organisations that submit challenges for student teams to solve during the event. Incorporating sustainability viewpoints into all student solutions should be anchored as a fixed component. This also contributes to a heightened awareness of sustainability and climate issues.

Measures to meet our ambitions

→ Ask students to view their proposed solution from a sustainability standpoint at each event

Evaluation of this measure

Difficulty level: ↓ **Low**
Impact rating: → **Medium**

Presumed responsibility for implementation: E³UDRES² members in direct contact with students (event organisers, Educational Entrepreneurs, coaches, etc.)

4.8 Energy Saving at E³UDRES² Events

During E³UDRES² events, the organising teams can ensure electricity is used in a mindful way. This applies to any sort of electronic device or service used.

Measures to meet our ambitions

→ Ensure the light is switched off when leaving rooms
→ Not using lights indoors when it is bright outside
→ Ensuring that devices such as computers are not switched on for longer than they are needed
→ Using AI-powered tools (such as ChatGPT) sparingly due to their extreme energy and water usage

Evaluation of this measure

Difficulty level: ↓ **Low**
Impact rating: → **Medium**

Presumed responsibility for implementation: Whole alliance

4.9 Adaptations in Merchandise & Printed Materials

It is recommended that during E³UDRES² events, as well as during events where E³UDRES² is promoted (for example institutional Open Days, International Weeks, etc.), all partnering institutions giving away merchandise consider sustainability aspects.

Measures to meet our ambitions

→ If merchandise is offered to the participants, ensure the products have as little environmental impact as possible (also consider shipping)

→ Consider whether the products can be reused for multiple events, or repurposed into something else

→ Question whether merchandise is really needed in the first place

→ Allow event participants to deliberately pick the merchandise items they find useful, for example by setting items out on a table instead of packing them in pre-made goodie bags

→ Depending on the event, allow participants to return items like lanyards (and, if used, plastic sleeves for nametags) to they can be reused for other events

Evaluation of this measure

Difficulty level: → **Medium**
Impact rating: → **Medium**

Presumed responsibility for implementation: Work Package 10, Whole alliance

Timişoara, Romania | 2017
A powerful storm ripped through the Romanian city of Timişoara in 2017, leaving eight people dead and at least 60 wounded. Some water and electricity supplies were cut. The storm reached peaks of 100km/h and came after the country had experienced unusually hot weather.
Picture: debanat.ro

5. Further information & recommendations

5.1 Examples of Institutional Good Practices

This chapter aims to serve as inspiration, showing which measures some individual E³UDRES² institutions already implemented in terms of sustainability.

→ **Food Waste**: Sodexo, the catering company providing catering at the St. Pölten UAS campus, weighs leftover food that is returned at the canteen. Using an online dashboard, the team of the canteen receives current data on saving potential on a daily basis and can immediately take measures to reduce food waste. For example, if needed, portion sizes and plate compositions can be adapted by monitoring returned plates with leftovers during operations. Leftover food is used for other recipes at times (for example unseasoned pasta for a pasta salad). In 2023, the canteen could achieve a waste rate of only four percent.

→ **Sustainable Merchandise**: The E³UDRES² Team at St. Pölten UAS regularly orders printed materials from online supplier druck.at. With sustainability efforts increasing, newly ordered materials such as flyers or brochures get printed on recycled paper, switching out all printed leaflets to recycled paper leaflets. St. Pölten UAS also opts for pens made of cardboard instead of plastic when ordering E³UDRES² merchandise.

→ **Mindful Use of Merchandise**: Politehnica University of Timisoara and St. Pölten UAS, during the E³UDRES² General Assemblies hosted at their institutions, had different strategies of mindful use of merchandise in place. At UPT, participants were able to get goodies during registration, but instead of getting a ready-made goodiebag, participants would choose goodies themselves from a table where they are on display. Merchandise included reusable water bottles, encouraging participants to drink the local tap water instead of using plastic water bottles. At St. Pölten UAS, participants of the E³UDRES² Forum got the option to return their lanyard nametags or other unused merchandise materials so they can get reused.

→ **Upcycling**: A local company in Lower Austria upcycled an outdated E³UDRES² rollup at St. Pölten UAS, making it into keychains and wallets. The old rollup system was reused and equipped with a new up-to-date fabric.

→ **Local products:** When preparing small gifts for guests or similar occasions, Vidzeme UAS mainly opts for products from local suppliers, like herbal teas, candied local fruit, recycled present boxes or paper notebooks.

5.2 Suggestions for Expansions of This Guide

This first version of the E³UDRES² Sustainability Guide is unable to cover all the sustainability aspects that may be of interest. Possible updated versions of this guide may include:

→ **Visualizing the gap between the E³UDRES² aims and the Green Deal**. How far is E³UDRES² away from being aligned with the goals of the Green Deal?

→ **Emissions of (online) IT and communication tools used in the alliance**. Emissions of online tools are often a blind spot, but their negative impact shall not be overlooked. Both online communication (e-mails and virtual meetings, for example), but also the (double) storage of all files results in energy consumption. With the accelerating use of AI for everyday work tasks, the resource use and emissions are rising even further.

→ **Emissions of equipment bought for the Alliance**. Although there is rarely any equipment bought for E³UDRES² as an Alliance (usually equipment is purchased by an individual institution), the emissions of these purchases could be examined further.

→ **Waste reduction**. A stronger focus could be put on seeing where we can avoid creating emissions and waste in the first place.

5.3 Final Recommendations & Next Steps

In line with the overview and action points outlined in this guide, the authors recommend the following steps:

- → **Commitment**: The main representatives of all E³UDRES² institutions are asked to commit to the implementation of as many measures proposed in this guide as possible

- → **Raising awareness**: Sharing the Sustainability Guide with all E³UDRES² members, pointing to the joint commitment to sustainability of the alliance as well as to the "responsibility for implementation"-section of each E³UDRES² sustainability ambition listed in this guide

- → **Publicity & accountability**: The E³UDRES² Sustainability Guide shall be publicly published on the E³UDRES² Website (under "Public Documents & Materials")

- → **Progress review**: The Board of Coordinators reviews and evaluates the progress made in terms of sustainability at each E³UDRES² Summit / General Assembly (twice a year)

Annex

This annex contains the E³UDRES² Sustainability Pledge, a joint document underlining the commitment of the E³UDRES² partner institutions to the recommendations outlined in the Guide.

The Sustainability Pledge does not bear the signature of a representative of the Hungarian University of Agriculture and Life Sciences due to their official status of Associated Partner in the E³UDRES² alliance. Nevertheless, the university is encouraged to participate in the joint sustainability efforts of the E³UDRES² alliance.

E³UDRES²

SUSTAINABILITY PLEDGE

We, the representatives of the E³UDRES² European University Alliance, recognise the responsibility to react to the climate crisis and jointly promote sustainable solutions.

E³UDRES², the Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions, encompassing nine universities and universities of applied sciences, is committed to integrating sustainability efforts in all its scopes of action.

We commit ourselves to following core principles such as:

- Reducing E³UDRES²-related air travel, shifting to more sustainable transportation policies
- Promotion of plant-based catering at E³UDRES² events
- Utilising E³UDRES² networks for demanding policy change in support of sustainable development
- Incorporating sustainability aspects into student-centered E³UDRES² events, contributing to raised awareness
- Regularly monitoring and improving E³UDRES²-related emissions per institution, creating a balance sheet for the E³UDRES² alliance as a whole

The implementation of these principles will be supported by the E³UDRES² Sustainability Guide. All E³UDRES² partners agree to either adopt the Guide or to introduce corresponding guidelines at an institutional level.

University of Applied Sciences St. Pölten
Hannes Raffaseder, 20.11.2025 18:06
Unterschrieben mit XiTrust MOXIS

University of Applied Sciences St. Pölten
Johann Haag, 18.11.2025 08:46
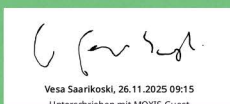Unterschrieben mit XiTrust MOXIS

Karim Khakzar, 28.11.2025
Khakzar, 28.11.2025 16:08
Unterschrieben mit MOXIS Guest

[signature omitted due to status as E³UDRES² Associated Partner]

USTP – University of Applied Sciences St. Pölten

Fulda University of Applied Sciences

Hungarian University of Agriculture and Life Sciences*

Vesa Saarikoski, 26.11.2025 09:15
Unterschrieben mit MOXIS Guest

I Grimm, 21.11.2025 08:23
Unterschrieben mit MOXIS Guest

Florin Dragan, 28.11.2025 10:46
Unterschrieben mit MOXIS Guest

Jamk University of Applied Sciences

Saxion University of Applied Sciences

Politehnica University Timișoara

Angela Lemos
Presidente, 20.11.2025 18:27
Unterschrieben mit MOXIS Guest

Marc Vandewalle
Marc Vandewalle, 20.11.2025 19:34
Unterschrieben mit MOXIS Guest

Agnese Davidsone
Agnese Davidsone, 20.11.2025 18:13
Unterschrieben mit MOXIS Guest

Polytechnic University of Setúbal

UCLL University of Applied Sciences

Vidzeme University of Applied Sciences

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* Fully engaged in E³UDRES² activities, currently holding the status of Associated Partner due to restricted access to EU funding

September 2025

E³UDRES²

Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions