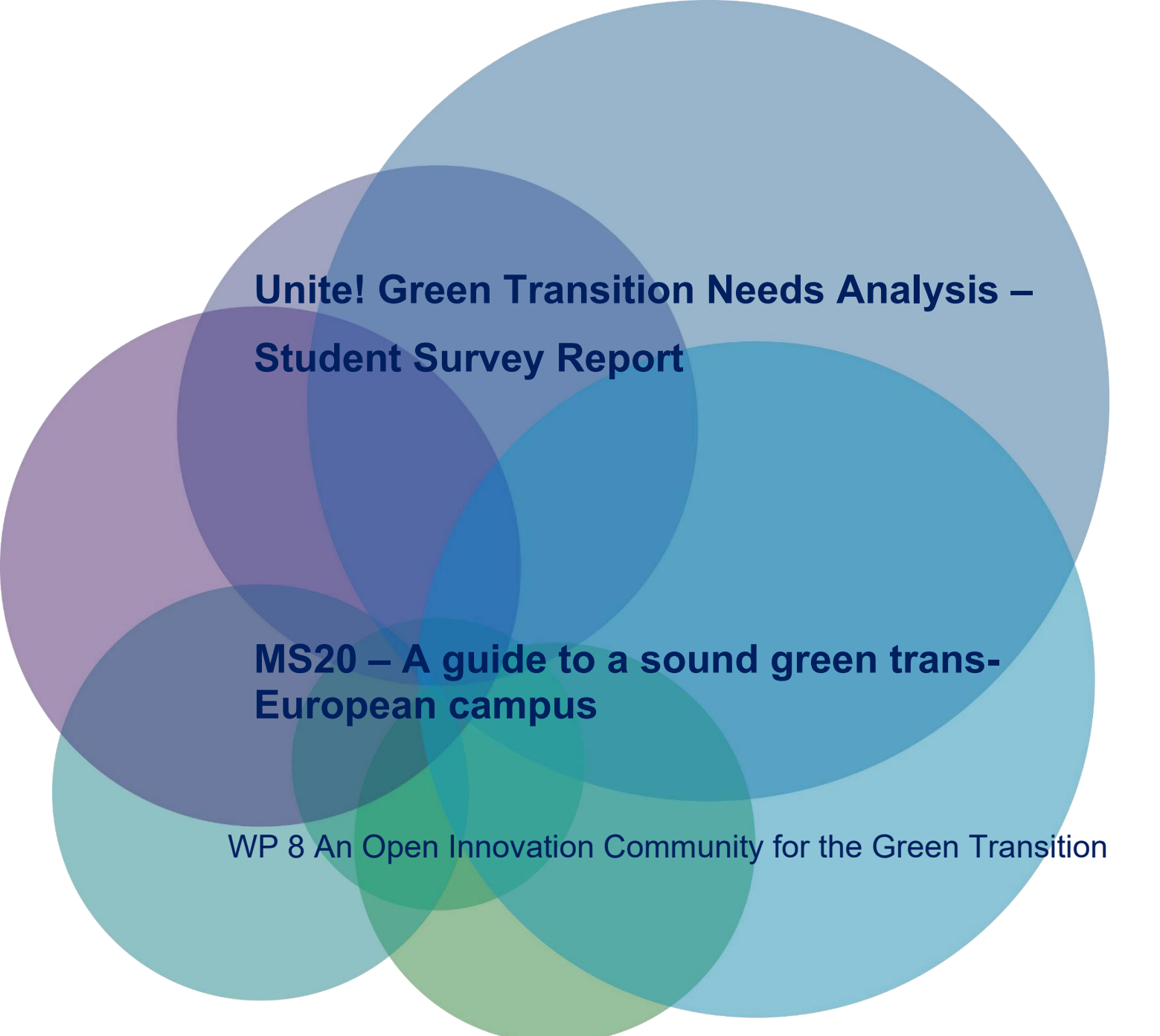




Unite! Green Transition Needs Analysis – Student Survey Report

MS20 – A guide to a sound green trans- European campus

WP 8 An Open Innovation Community for the Green Transition

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Unite! Green Transition Needs Analysis – Student Survey Report

Abstract

This milestone report (MS20) produced under the Unite! Alliance's Erasmus+Project (Work Package 8: Open Innovation Community for the Green Transition) presents an analysis of stakeholder needs with particular attention to students' needs related to the green transition across all nine partner technical universities. A total of 203 responses were collected from students, including doctoral candidates. The survey targeted selected groups of active and engaged students (student unions, Unite! initiatives, student associations, doctoral candidates), not the full student population; therefore, the sample reflects this specific audience. was conducted to assess sustainability awareness, attitudes, and priorities in the areas of education, research, and campus operations. Most students report high sustainability awareness and strongly support their universities aligning with green transition principles. However, nearly three-quarters perceive only limited sustainability content in their courses, underscoring the need for better integration of sustainable development into curricula. Respondents favor practical, interdisciplinary learning approaches (e.g. project-based modules and climate-focused electives) over a one-size-fits-all mandatory course.

Approximately 70% of surveyed students want their universities to adopt research policies that prioritise sustainability-related topics, and nearly half are interested in participating in sustainability-focused research projects. Regarding campus operations, students identified their top priorities as the expansion of green spaces, waste reduction measures, increased renewable-energy implementation, and well-being initiatives as essential components of a “green” campus. The main barriers to progress identified by the respondents include insufficient funding, low engagement level and bureaucratic constraints. A majority favor a phased implementation of green-transition measures, such as piloting initiatives before scaling them up). Additionally, more than half declared willingness to become personally involved in supporting sustainability activities at their universities. Overall, the findings offer clear direction for Unite! partner institutions in shaping future sustainability measures. As a WP8 milestone, this report ensures

that students need to inform the alliance's green transition strategies and campus development efforts.

1. Introduction

Unite! – the University Network for Innovation, Technology and Engineering – is a strategic alliance of nine European universities that jointly advance cross-border collaboration in education, research, and innovation. The alliance aims to build a seamless trans-European campus that fosters excellence, promotes multilingual and multicultural learning environments, and supports societal transformation through sustainable and digital innovation. In this context, Community 8 (Cm8), the Open Innovation Community for the Green Transition, leads Unite!'s green transition initiatives. Cm8 is responsible for developing and piloting Green Standards across partner institutions and for strengthening collaboration with regional innovation ecosystems, thereby contributing to the alliance's broader mission of driving innovation and supporting the UN Sustainable Development Goals through coordinated digital and green transitions.

This Survey Report has been prepared by Cm8 as Milestone **MS20: “Analysis of stakeholders’ needs”**, a deliverable under Unite!'s Work Package 8 (Green Transition). The objective of the report is to identify green transition-related priorities among students, including doctoral candidates, across the Unite! partner universities. By analysing stakeholders' expectations and needs in this area, the report provides essential insights to support the development of effective sustainability strategies and campus initiatives aligned with the alliance's overarching green transition goals.

2. Background and Objectives

Unite! (University Network for Innovation, Technology and Engineering) is an alliance of nine European technical universities collaborating to promote innovation in education and research. In the context of the Erasmus + financed project, Unite! has established an **Open Innovation Community for the Green Transition (Work Package 8)**, which focuses on developing and implementing “Green Standards” for universities. These Green Standards cover three main pillars of activity: **Green Research (GR-series)**, **Green Education (GE-series)**, and **Green Campus operations (GC-series)**. The overarching aim is to create a model of a sustainable, trans-European campus – integrating sustainability into research and teaching, improving campus management practices. As part of this effort, it is crucial to assess the needs, awareness, and priorities of the university community regarding the green transition.

This report corresponds to milestone **MS20: “Analysis of stakeholders’ needs – Academic stakeholders (students, academics, supporting staff) in terms of green changes/actions to be introduced on campus.”** The primary objective is to analyze survey feedback from students across Unite! partner universities about how their institutions can better support environmental sustainability. The **survey** was designed to capture student perspectives on a range of topics aligned with the Unite! Green Standards and the U.N. Sustainable Development Goals (SDGs), including: current awareness of sustainability issues, desired changes in curricula, views on research and innovation for sustainability, evaluation of campus sustainability initiatives, and perceived barriers to green transformation. By gathering input directly from students – the key academic stakeholders – the survey aims to guide the development of “meaningful, student-centered green initiatives” both at each university and across the Unite! network.

Ultimately, the needs analysis will inform Unite!’s action plans and pilot projects under WP8. The findings will be used to ensure that planned green transition initiatives (such as revising curricula, improving campus facilities, and supporting sustainability research) address the actual needs and preferences of students.

3. Methodology

Survey Design: The student survey (titled “Green Transition University Survey – Student Preferences and Needs in Alignment with Developed Green Standards”) was developed jointly by the Unite! WP8 team. It consisted of 24 questions, mostly multiple-choice with some Likert-scale and one open-ended item. The questions were structured in seven sections covering: demographics and academic profile (1), overall sustainability awareness (2), attitudes towards integrating sustainability in **education** (curricula and courses) (3), perspectives on **research** and innovation related to SDGs (4), opinions on **campus** sustainability practices (Green Campus standards) (5), perceived **barriers** (6), and an invitation for any additional comments (7). Many questions were directly linked to Unite!’s Green Standards and SDG focus areas, ensuring that the collected data would correspond to the alliance’s sustainability objectives. The survey was anonymous and voluntary, with an estimated completion time of ~20 minutes.

Distribution and Sample:

The survey was created and administered using the LimeSurvey platform. It was embedded on the website of Wrocław University of Science and Technology. In accordance with GDPR and Unite! data governance rules, distribution to students was managed exclusively via Student Liaison Officers (SLOs) at each of the nine partner universities. Local Unite! coordinators promoted the survey in each institution.

The target group included students actively engaged in campus life — such as those involved in student unions, student parliaments, SURE! participants — as well as doctoral students and early-stage researchers pursuing a PhD degree.

The online questionnaire was disseminated among students at all nine Unite! partner universities: Aalto University (Finland), Graz University of Technology (Austria), KTH Royal Institute of Technology (Sweden), Politecnico di Torino (Italy), Technical University of Darmstadt (Germany), Universidade de Lisboa (Portugal), Universitat Politècnica de Catalunya (Spain), University Grenoble Alpes (France), and Wrocław University of Science and Technology (Poland).

The survey campaign ran from 17 June to 24 October 2025, with data collection unfolding in multiple coordinated phases:

- 17 June – official launch, with instructions sent to SLOs;
- 5, 29 September and 10 October – consortium-wide reminder emails;
- 14 October – internal mailing at Wrocław Tech and renewed follow-up with all SLOs;

- 6–9 October – direct promotion during the Aalto Dialogue meeting;
- 24 October – survey formally closed.

These reminder waves had a tangible impact on response rates. The **Figure 1** below visualizes the cumulative completions over time:

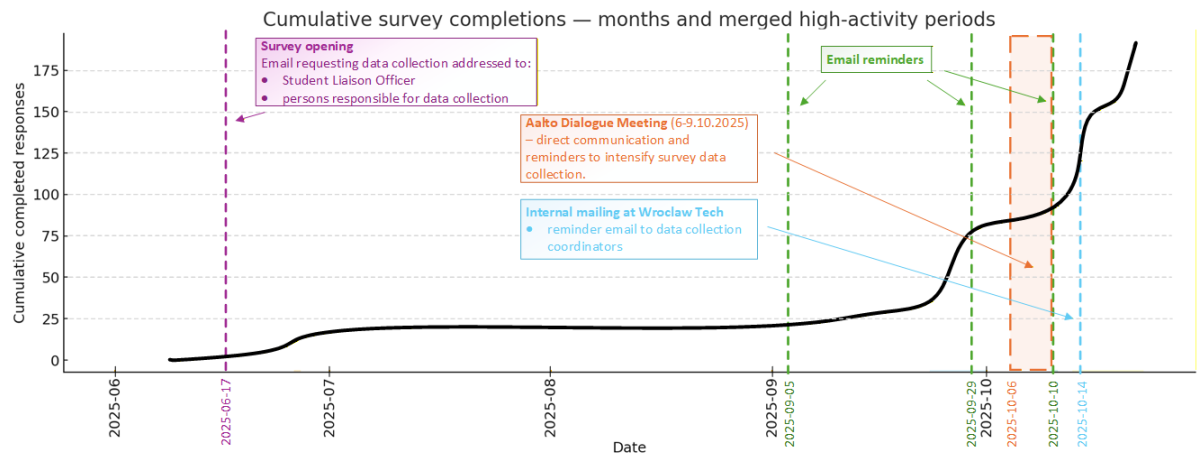


Figure 1: Cumulative number of student responses collected over time (June–October 2025)
Vertical lines mark major reminder mailings and coordination points.

A total of **203 student responses** were recorded across the alliance. The response count per university varied, reflecting differences in outreach and engagement – for instance, 53 responses came from Universidade de Lisboa and 42 from Wroclaw Tech, whereas only 2 came from Aalto and 1 from Grenoble (see **Figure 2**). Overall, five universities contributed 25 or more responses each, providing a reasonably diverse sample despite the imbalance. Response data were collected and exported from the survey tool in CSV format for analysis.

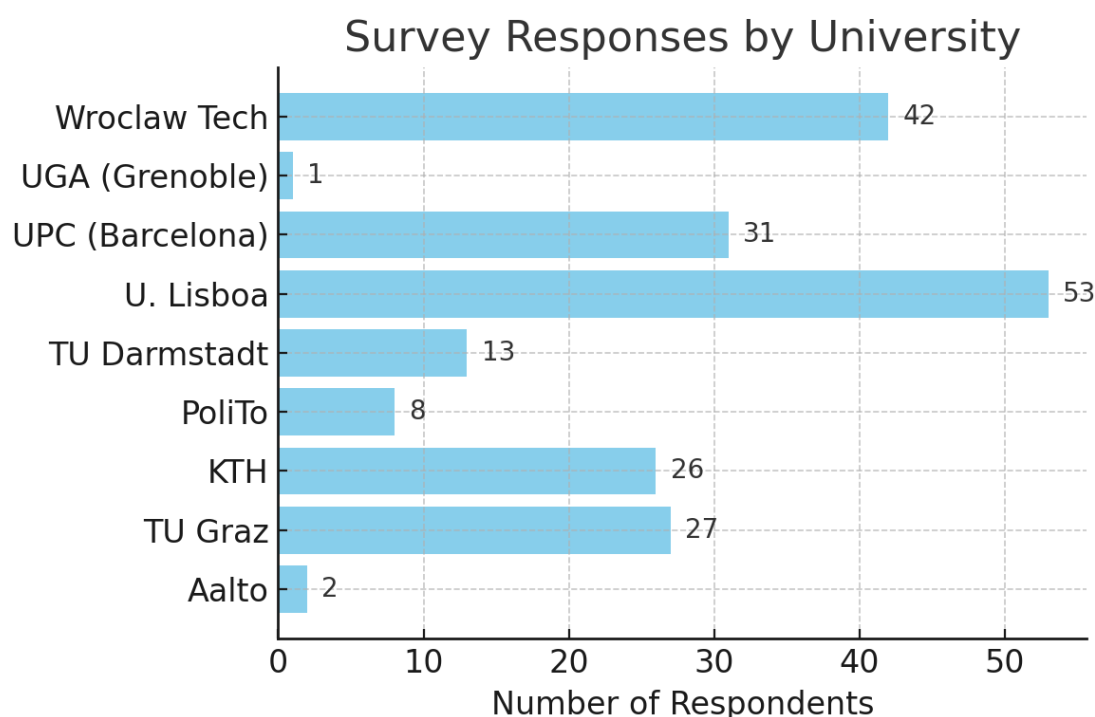


Figure 2: Number of student survey respondents by university (N=203). Lisbon and Wroclaw Tech together accounted for ~46.8% of the responses, whereas some partner universities had low turnout. This variation should be considered when interpreting aggregated results.

Data Analysis: Survey data were analyzed using Python/Pandas and visualization libraries. Both quantitative and qualitative responses were examined. For closed-ended questions, we computed frequency distributions and percentages based on the number of valid responses for each item (question-specific N), excluding missing values and technical non-responses. For Likert-type items, some indicators are reported as aggregated categories (e.g. “very important + essential” or “at least moderately important”), calculated as the sum of the relevant response counts divided by the valid N for that item. For multiple-response questions, where respondents could select more than one option (e.g. choosing up to three preferred actions), results are presented as the number and share of respondents who selected each option; because the same respondent may choose several options, these percentages overlap and do not necessarily sum to 100%. In cases where respondents skipped questions or dropped out before completing the survey, we report the effective sample size for that question. In general, between 125 and 160 students answered each of the substantive questions beyond demographics, with 115 students completing the entire survey. Percentages in the narrative text are mostly rounded to whole numbers, so minor discrepancies of 1–2 percentage points may occur when compared to the

raw data.

We aggregated results across all universities for most of the analysis, given the primary goal of understanding overall trends. Where meaningful, we also compared responses by university or demographic subgroups to check for any notable differences (for example, whether students from certain universities reported higher sustainability awareness or different priorities – no strong systematic differences were found, likely due to the shared technical focus of these institutions). The open-ended **Final Comments** were reviewed to extract common themes and illustrative remarks, which are summarized in the report. These qualitative inputs provided context and nuance to the quantitative findings.

It should be noted that the survey sample is **self-selected** and not uniformly distributed, so findings are not necessarily statistically representative of the entire student populations at each university. Nonetheless, the results offer valuable insight into the views of engaged students across the alliance. In the analysis below, percentages are rounded to the nearest whole number and figures are included to visualize major findings. All question wording is summarized for brevity, with full question text available in the survey instrument (see Appendix or referenced in-text where relevant).

4. Respondent Profile

The sample covered a range of **fields of study**, though engineering disciplines dominated as expected in a technical university alliance. Over half of respondents (106) identified their field as *Engineering & Technology*, and an additional 20% were in *Natural Sciences*. Smaller numbers came from *Computer Science/IT* (11%), *Social Sciences* (9%), *Architecture and Design* (5%), and other fields (see **Figure 3**). A few students selected multiple fields, reflecting interdisciplinary studies. This disciplinary mix suggests the feedback largely represents STEM students with some diversity of academic backgrounds.

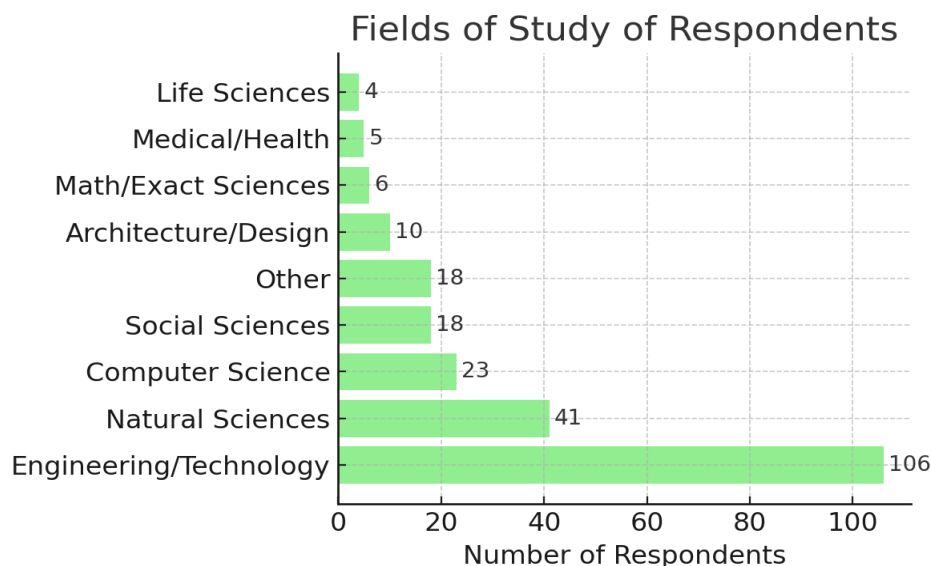


Figure 3: Fields of study of survey respondents. Engineering/Technology was the most common field (~52% of respondents), followed by Natural Sciences (~20%). “Other” includes fields not listed or more specific specializations provided by students.

In terms of **study level**, just over half (53%) of respondents were *undergraduate (Bachelor’s)* students, 28% were *Master’s* students, and 16% were *doctoral* candidates, with a few others (e.g. recent graduates or “other” status). This indicates that while the majority of respondents were in their early years of study, a significant portion were advanced students, likely bringing perspectives from graduate-level research and international experiences. The age distribution was correspondingly skewed toward typical university ages: about 56% were aged 18–23, 20% were 24–26, and ~23% were 27 or older (including some PhD students in the 31+ category). Only 2 respondents were under 18 (high school participants in a program, perhaps).

There was an **even gender balance**: 48% identified as *Female* (97 respondents) and 47% as *Male* (96), with a small minority preferring not to say or identifying as non-binary/other. The broad gender parity adds confidence that the results are not biased to one gender's perspective. Approximately two-thirds of respondents had *no prior international mobility experience*, whereas one-third had participated in programs like Erasmus+ study exchanges, Blended Intensive Programmes (BIP) or other international experiences. This suggests that many respondents were “local” students without extensive exposure to other campuses, which could influence their views on campus practices (e.g., they might be less aware of sustainability measures elsewhere). However, those with mobility experience can provide comparative insights.

In summary, the respondent profile spans a cross-section of Unite! university students: primarily STEM fields, a mix of undergraduates and graduates, balanced genders, and a range of European campus contexts. This diversity strengthens the relevance of the aggregated findings.

5. Sustainability Awareness and Attitudes

Overall Awareness: When asked to self-assess their **awareness of environmental sustainability and green transition issues (including the SDGs)**, the majority of students reported a relatively high level of familiarity. Specifically, 39% described their overall awareness as “**High**”, and an additional 13% as “**Very High**”, totaling 52% with high/very high awareness (Figure 4). Another 36% felt their awareness was “Moderate.” Only about 11% rated themselves “Low” or “Very low.” This indicates that among the survey participants – who may be more sustainability-minded than the general student body – there is a strong base of knowledge on sustainability topics. Very few students felt they had very low awareness, suggesting that sustainability has permeated student consciousness to some extent (likely through media, coursework, or personal interest).

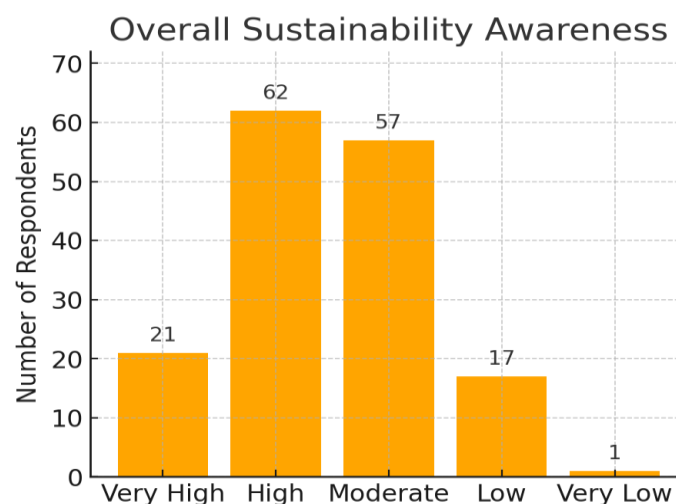


Figure 4: Student self-rating of overall sustainability awareness. Over half consider their awareness high, while very few (<2%) admit to very low awareness.

Attitude toward University’s Green Alignment: Students were next asked how important it is that their **university’s activities align with green transition principles and the SDGs** – broken down by aspect: *education (curricula and programs)*, *research*, and *campus operations*.

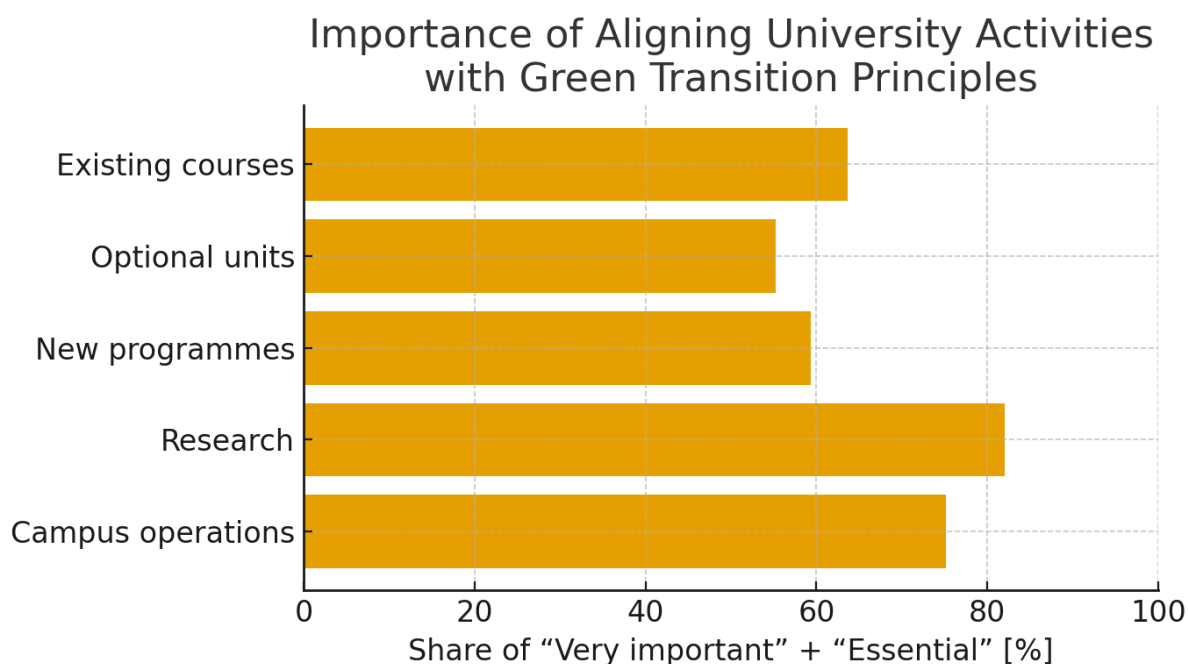


Figure 5: Importance of Aligning University Activities with Green Transition Principles (Share of "Very important" + "Essential")

The responses showed overwhelming support for integrating sustainability in all areas:

- For *educational offerings*: 63% said it is **"very important" or "essential"** that existing courses include sustainability topics, and similarly 59% for developing new sustainability-oriented programs or modules. Around 20–25% called it "moderately important," and only ~10% viewed it as of low importance. Clearly, students value a green dimension in the curriculum.
- For *research*: even higher support was observed – fully **82%** of respondents rated aligning university research with sustainability as *very important or essential*, with nearly half (47%) choosing "Essential." This likely reflects an expectation that universities, as research leaders, should tackle sustainability challenges and that students want to see their institutions contributing knowledge to the green transition.
- For *campus management*: about **75%** marked it very important/essential that campus daily operations (energy use, waste management, etc.) follow sustainability principles. Many students are concerned with their immediate campus environment and want universities to "practice what they preach" in operations. Only 6% felt campus greening

was not or only slightly important, making it the aspect with one of the strongest consensus.

- Additionally, 55% of respondents considered the introduction of *new optional sustainability-oriented curricular units* to be very important or essential.

In summary, student attitudes strongly endorse the **Unite! Green Standards vision** of integrating sustainability across education, research, and campus domains. Virtually no respondents were outright dismissive of these goals. This broad agreement provides a mandate for university leadership to **pursue green transition initiatives, backed by student approval**. It is worth noting that research alignment scored even higher on “essential” ratings than teaching or campus – possibly because students see research as a critical lever for innovation in sustainability, or because many graduate students responded with keen interest in research. Regardless, the expectation is that universities become models of sustainable practice and thought leadership.

6. Student Perceptions of Sustainability Research Priorities

Understanding how students perceive their universities' research priorities is essential for evaluating the extent to which academic institutions advance sustainability objectives. This part of the analysis examines student awareness of sustainability-related research themes, their interest in engaging in green research initiatives, and their expectations regarding institutional policies that support sustainable research practices. The findings highlight both recognized strengths and areas where communication or strategic alignment may require reinforcement.

Sustainability Topics of Interest: The survey also gauged which **sustainability themes** (framed by selected SDGs) students believe are currently emphasized in their university's research. The most commonly recognized areas were:

- **Industry, Innovation and Infrastructure (SDG 9):** selected by 92 respondents (approximately 68% of those familiar with their university's research focus). This likely resonates with the technical universities' profile – many research projects on innovative engineering, smart infrastructure, etc., are seen as contributing to sustainability.
- **Climate Action (SDG 13):** checked by 73 respondents (54%). Climate change is a high-visibility issue and students perceive it as a focus of research in their institutions (e.g., in energy, environment, climatology fields).
- **Sustainable Cities and Communities (SDG 11):** 69 respondents (51%) saw this as a research priority, reflecting urban sustainability initiatives and collaborations with cities that several Unite! universities engage in.
- **Responsible Consumption and Production (SDG 12):** 57 respondents (42%). Topics like circular economy, waste reduction, and sustainable manufacturing are acknowledged but somewhat less prominently.
- **Life on Land (SDG 15):** only 33 respondents (24%) thought this was a key research theme at their university. Being largely technological universities, topics like biodiversity, ecosystems, or land management might indeed receive less attention, or students are less aware of them.

It is notable that **15% of students did not select any of the provided SDG topics**, perhaps indicating they are *not aware* of how (or if) their university's research connects to sustainability.

This suggests a gap in communication: some students simply might not know the sustainability dimensions of research happening on campus. None of the respondents suggested an “Other” topic beyond the provided SDGs, implying the list covered the main areas they think of. These perceptions can guide how universities communicate their research impact in sustainability to students – clearly highlighting existing work on climate, innovation, and urban sustainability, while perhaps increasing visibility of efforts on biodiversity and responsible production.

Engagement in Green Research: Students were asked if they would be interested in **participating in student-led research projects or thematic communities related to sustainability/SDGs**. Half of the respondents (50%) answered “Yes”, and an additional 35% said “Not sure/maybe.” Only 15% were not interested. This is an encouraging sign that a large pool of students is open to active engagement in research for sustainability, beyond their regular curriculum. It aligns with Unite!’s goal of building bottom-up “thematic communities” in the green transition. The relatively high “not sure” portion suggests that while many are willing in principle, actual participation might depend on factors like time, opportunities available, or incentives. Still, the data indicates substantial latent interest that universities can tap into by offering research internships, volunteer projects, or student research groups focusing on sustainability challenges.

Support for Research-Related Sustainability Policies: The survey presented four specific policy actions related to greening research and asked students to rate their importance on a scale from “Not important” to “Essential.” Student responses were strongly positive toward all proposed measures:

- **Monitoring the environmental impacts of research activities:** 91.2% rated this as at least moderately important, including 71% who said *very important or essential*. Students expect universities to assess the carbon footprint or ecological impacts of research labs, conferences (travel), experiments, etc., as part of accountability.
- **Allocating funding to sustainability-focused research projects:** 90.5% at least moderately important, with ~72% very important/essential. Students clearly feel universities should put money behind green research areas, possibly reflecting a view that funding drives priorities and outcomes.
- **Rewarding low-impact research practices** (e.g. virtual meetings to reduce travel, remote collaboration): While still mostly supported, this had the lowest strong support

– about 55% very important/essential, and 22% moderate. Notably ~16% rated it only slightly important and 7% not important. Some students may be cautious about this, perhaps concerned that over-emphasizing virtual interactions could hinder research collaboration or quality (a comment in the open feedback indeed cautioned that “*in-person meetings and therefore travel are extremely important for research... virtual is not always a viable replacement*”). So while students generally agree low-carbon practices are good, they may not want them to be *heavily* enforced at the expense of research activities.

- **Promoting dedicated sustainability research groups or centers:** 86% at least moderately important, with 66% very important/essential. Students value having focused groups that drive sustainability research, likely seeing them as hubs that can raise the profile of green transition topics within the institution.

The takeaway is that students want their universities to **lead by example in research** – tracking and reducing environmental impacts and proactively supporting sustainability research. This aligns with the Green Standards for Research (GR-series), which call for integrating sustainability in research management and fostering interdisciplinary research on sustainability solutions. Students are largely on board with these ideas, though implementation should consider practical trade-offs (as indicated by the slight reservation around limiting travel).

7. Curriculum and Educational Offerings

One of the central parts of the needs analysis is understanding how students perceive the **current integration of sustainability in their education** and what changes they would like to see. The survey results highlight a strong appetite for more sustainability content, delivered in practical and engaging ways.

Current Exposure to Sustainability in Curriculum: Students were asked to choose the statement that best describes their experience with sustainability topics in their studies so far. The options ranged from having no content, to some exposure, to multiple modules or extensive content on sustainability/SDGs. As illustrated in **Figure 6**, a majority of students have encountered at least some sustainability-related material, but depth and satisfaction vary:

- **“Some exposure, but I want more”** was the most selected description (46% of respondents). These students have seen sustainability mentioned or included in a few classes, but feel it’s insufficient and desire greater coverage. This suggests a latent demand for more comprehensive integration of sustainability across the curriculum.
- **“Multiple modules on sustainability/SDGs”** (e.g. several courses or a significant portion of their program focuses on these topics) was chosen by 28%. These students likely come from programs or tracks that emphasize sustainable development or have taken dedicated electives. While they have substantial exposure, this group is in the minority – indicating that only about one-quarter of students feel their curriculum already covers sustainability in a thorough way.
- **“No explicit content related to sustainability”** was reported by 25%. A quarter of respondents said they have not had any formal teaching on sustainability or SDGs in their coursework. This is significant: despite universities’ increasing focus on sustainability, a considerable segment of students (particularly from fields like classic engineering, mathematics, etc.) may still graduate without ever engaging with these concepts in class.

Exposure to Sustainability Topics in Curriculum

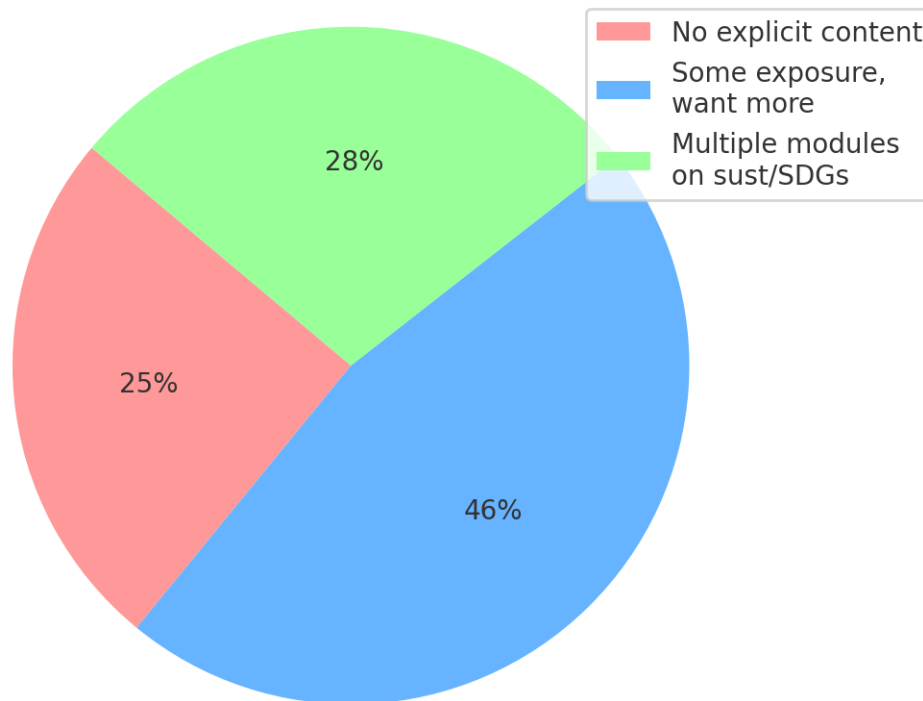


Figure 6: Student reports of sustainability content in their current curriculum. Nearly three-quarters have either no exposure or only superficial exposure and desire more.

This distribution clearly signals that **students want more sustainability** in their education – with about 71.7% either having none or wanting more than they’ve had. It provides a strong rationale for Unite! universities to ramp up curriculum changes in line with *Green Education (GE)* standards (which include embedding sustainability and SDG learning outcomes into programs).

Preferred Ways to Incorporate Sustainability into Curriculum: The survey allowed students to select up to three ideas for how the university should **integrate green transition topics into existing or new curricula**. The options encompassed various educational strategies, from new courses to project work. The most popular choices (Figure 7) emphasize practical, applied learning:

- The top choice, selected by ~48% of respondents, was introducing **interdisciplinary projects or capstone experiences linking sustainability to each major**. Students clearly value project-based learning, especially if it connects sustainability to their

specific field. This approach allows hands-on problem solving and demonstrates relevance to their discipline.

- Nearly as popular (47%) was to **integrate life-cycle assessment (LCA) or life-cycle costing modules** into relevant courses (engineering, business, etc.). This suggests students see value in concrete tools and methods (like LCA) being taught across programs to evaluate environmental impacts. It's a practical skill that could be embedded in technical curricula.
- Equally important for students is also the need to **develop specialized electives or entire programs on climate change, renewable energy, low-carbon technologies, etc.**, chosen by ~46%. Many students want opportunities to delve deeper via elective courses or even new Master's programs focused on sustainability themes. This may reflect the interest of those who would like to specialize in sustainability as a career path.
- **Inviting external stakeholders (e.g., companies, local authorities, NGOs) to co-develop a sustainability-focused curriculum** was selected by about 38%. Students appreciate the idea of industry and community input, ensuring that curriculum changes are aligned with real-world needs and possibly creating opportunities for guest lectures or projects with external partners.
- **Offering a dedicated core course required for all students** (e.g., "Introduction to Green Transition") was less favored, picked by only ~34% of respondents. This is interesting – while one might assume a universal course would be a straightforward solution, students seem to prefer embedding content in existing courses or via electives and projects, rather than a one-size-fits-all mandatory class. A compulsory course might be seen as too generic or an extra burden unless very well designed. Some qualitative comments echoed this, with one student noting not everyone is interested in "centering their education on green standards," implying a mandated course might face mixed reception.
- **Other** ideas were suggested by a few (10 respondents) – these write-in suggestions (from the open comments) included proposals like integrating sustainability in *all* courses in subtle ways, offering micro-credentials, or ensuring active teaching methods.

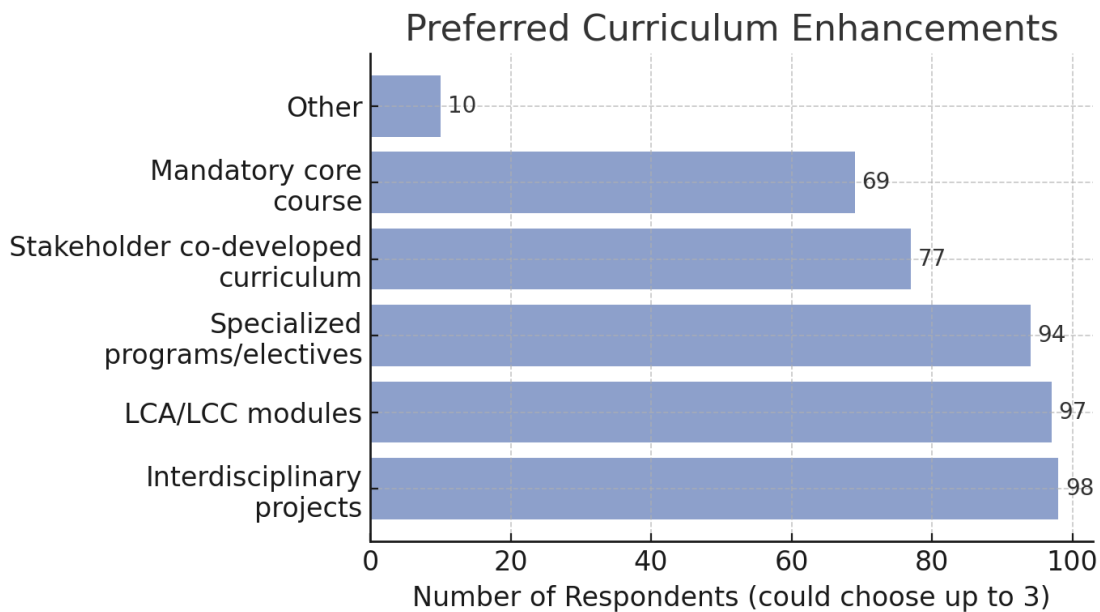


Figure 7: Preferred curriculum enhancement actions (students could select up to 3). Practical, project-based and integrative approaches (highlighted in blue) outranked a generic mandatory course.

In summary, students advocate for **mainstreaming sustainability in education through active learning**: capstone projects, integrated course modules, and specialized electives. Less enthusiasm for a universal theory course suggests that making sustainability *contextual* (within each field) and *hands-on* is the preferred route. Universities can take this input to prioritize curriculum reforms such as adding sustainability components to existing technical courses (e.g. a module on LCA in a design course), fostering interdisciplinary project courses, and expanding elective offerings on sustainability topics.

Learning Outcomes and SDGs: Reflecting the above, when asked “*How important is it that all study programs contain explicit learning outcomes tied to one or two SDGs?*”, **62%** of students answered “*very important*” or “*essential*.” A further 28% said “*moderately important*.” Only ~10% were neutral or felt it not important. This broad agreement shows that students support the idea of embedding SDG-aligned learning outcomes across different faculties – a principle that is part of Unite!’s Green Education standards. It means, for example, an engineering program might have a learning outcome about considering environmental impacts, or a business program one about sustainable practices. Students see this as a positive step to ensure every graduate has at least some sustainability competence. Making such

outcomes explicit could also improve visibility of sustainability in the curriculum (addressing those 25% who currently see none).

Student Readiness to Learn More: The survey also asked point-blank: *“Would you take part in elective courses or training specifically on SDGs and the green transition?”* The response was a resounding **“Yes” from 60%** of respondents, with an additional 29% “Not sure, maybe.” Only 10% said “No.” This reinforces that there is a willing audience for additional educational offerings in sustainability. The fact that nearly a third are unsure (but not opposed) suggests that if courses are made interesting and schedules permit, even more might enroll. Essentially, if universities provide the opportunities (electives, workshops, etc.), students will likely engage, as long as it adds value to their studies or personal development.

Preferred Format for Sustainability Education: Students were asked to select their **preferred ways of delivering content on sustainable development**, choosing all methods that appeal to them. The results (Figure 8) show that variety and interactive formats are key:

- The top preference (selected by 83 students) was through **“meetings with industry/business representatives at the university, combined with project-based learning”**. Students are keen on real-world exposure – having experts from industry or public sector come in to present challenges, mentor projects, and link theory to practice. This again underlines the desire for applied learning.
- Close behind, **“lectures by external experts or researchers”** was chosen by 80 students. Guest lectures, seminars or even a lecture series on sustainability topics would be well-received. Students value learning directly from subject-matter experts, especially those working on sustainability issues.
- **Elective courses** were favored by 67 respondents, and **additional classes within the existing curriculum** by 64 respondents. Many students are open to academic coursework on sustainability, either integrated into their program or as separate electives. This aligns with earlier findings on willingness to take extra courses.
- **Non-curricular options** (like extracurricular workshops, student club activities, etc.) attracted only 31 votes – making it the least preferred method. This suggests that students do see sustainability education as something that should be part of their formal learning rather than solely left to extracurricular activities. Time is often limited, so

embedding content in the curriculum or offering credited courses might engage more students than expecting them to join voluntary sessions outside class.

- **“Other” formats** were not suggested beyond the above, indicating these categories captured the main ideas.

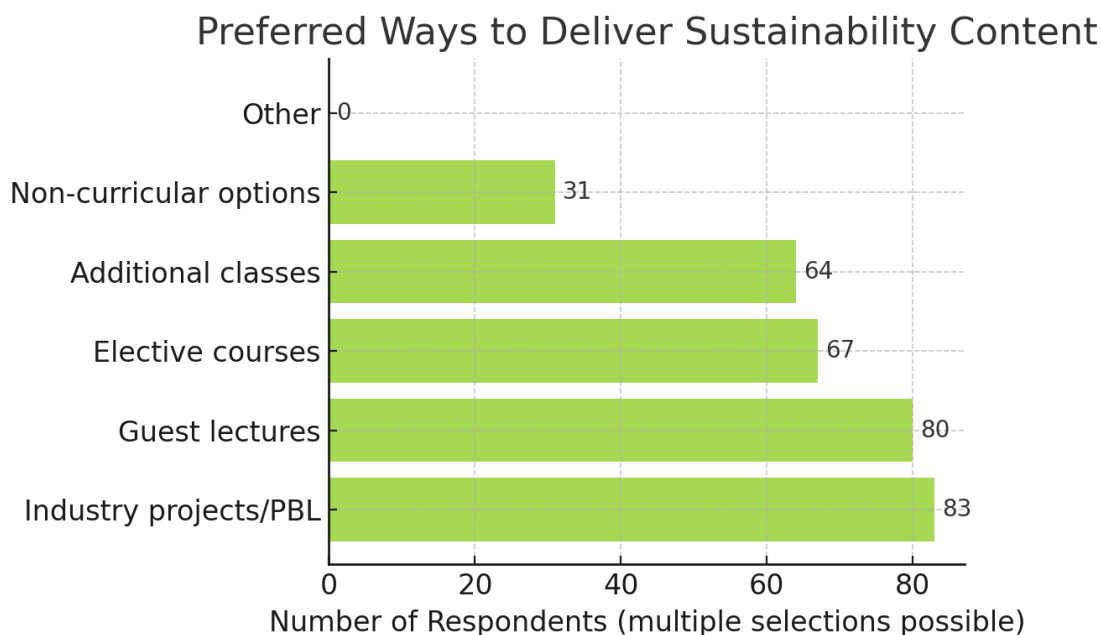


Figure 8: Preferred ways to receive sustainability-related content. Interactive engagements (industry projects, expert lectures) rank slightly higher than traditional courses. Few students chose non-curricular (purely extracurricular) means, signaling a preference for formal educational contexts.

The implication for curriculum design is that **students appreciate experiential and external-input learning** on sustainability. Universities might consider, for example, a seminar series featuring sustainability leaders, integrating case studies co-developed with industry into courses, or hackathon-style projects with city partners. While classic coursework is still important (and desired by many), spicing it up with these interactive elements may enhance learning and keep students engaged on sustainability topics.

Finally, it's worth noting from the **open-ended comments** that multiple students called for mandatory inclusion of sustainability in programs. For instance, one student wrote *“first and foremost make a sustainable approach in every lecture. Don't offer isolated classes because only those few who are already interested will take them! target all students. Sustainability is a way of thinking!”* Another suggested that universities should do *mandatory courses so people*

have to do them. Electives would probably not be enough. These comments echo the sentiment that sustainability should not be siloed – it should permeate the educational experience throughout a student’s journey.

8. Research and SDG Integration

In addition to curriculum, the survey explored how students view their universities' **research** role in the green transition and how they think research activities could align with sustainability goals. The results indicate that students expect a strong institutional commitment to sustainability in research priorities, but also highlight opportunities for better communication and engagement of students in research.

Perceived Research Focus on Sustainability: As noted, many students are aware of sustainability-related research at their universities, particularly in areas aligned with technical expertise: - Innovation for sustainable infrastructure (SDG 9) and climate change solutions (SDG 13) are widely recognized. - Fewer students see a focus on ecological or social SDGs (like Life on Land, or even Sustainable Cities to a degree), which might mean those areas are genuinely less prominent or just less visible to students. Universities might want to highlight any research on biodiversity, sustainability in social sciences, or urban sustainability to improve student awareness and pride in those efforts.

It's possible that the prominence of SDG 9 (industry/innovation) reflects a bias: students might classify a lot of research under that broad banner since technology innovation is core to these schools. They might be less clear on what research falls under SDG 11 or 15, etc. This hints that framing research in terms of SDGs could be an effective way to communicate impact – some Unite! universities have begun mapping their research projects to SDGs in annual reports; extending that to student-facing communications could help.

Student Involvement in Research: With half of respondents interested in participating in sustainability research projects, there is an opportunity to channel this enthusiasm. Universities could facilitate more **student research opportunities** on sustainability – for example: - Offering undergraduate research assistant positions on faculty sustainability projects. - Encouraging or requiring that final-year thesis projects incorporate sustainability considerations (where relevant). - Creating interdisciplinary student research teams to tackle campus sustainability problems (living lab approach).

This would not only enrich student learning but also advance the universities' own sustainability initiatives with fresh ideas and labor.

Policy Implications: Students' strong support for monitoring research impacts and funding green projects provides a clear mandate. Many Unite! universities have statements about

sustainability in research, but concrete policies vary. Possible actions consistent with student expectations include: - Requiring research proposals to include a brief sustainability impact statement or mitigation plan (for instance, how will labs minimize waste, or how will necessary travel be offset). - Allocating internal grant funds or seed funding specifically for SDG-related research (which students see as important). - Encouraging low-carbon research practices by, for example, recognizing departments or labs that significantly reduce travel or energy use (some respondents liked the idea of rewarding low-impact practices, though it had slightly less consensus). - Expanding or promoting institutes/centers focused on sustainability challenges (respondents want these groups “promoted”).

One student comment advocated a *“research-based approach to avoid unnecessary implementation of unproductive methodologies”*, cautioning that decisions should be evidence-based. This aligns well with involving the research community in evaluating which sustainability actions truly work (versus greenwashing). It suggests that students want rigorous analysis behind campus sustainability measures – a role that could be filled by faculty and students through research projects assessing campus interventions (for example, analyzing the effectiveness of a recycling campaign or energy-saving initiative as a research study).

In conclusion, students see research as a pivotal component of the university’s contribution to sustainability and they are eager both to see high-level commitment (through policy and funding) and to personally engage. Embracing this by creating more avenues for student research participation and transparently prioritizing sustainability in research agendas will not only meet student expectations but likely also accelerate Unite! universities’ progress toward their green transition targets.

9. Green Campus Practices and Perceptions

The **campus operations** aspect of sustainability – often termed “green campus” – is the third pillar of the Unite! Green Standards (GC-series). The survey results shed light on what students observe (or fail to observe) happening on campus, their awareness of initiatives, and their priorities for future campus improvements.

Awareness of Current Initiatives: Students were asked which specific campus sustainability programs or actions they are aware of at their university. The options included common initiatives: greenhouse gas emission reduction plans, paper/plastic reduction, water conservation, energy monitoring, extracurricular student green activities, or none/other. The responses (Figure 9) indicate considerable variability in awareness:

- The highest awareness was for **campus energy monitoring** systems: 54 students (likely ~35–40% of those who answered) knew of some effort to monitor or optimize energy use on campus. Examples might be energy dashboards in buildings or campaigns to save electricity.
- **Paper and plastic reduction programs** (e.g., going paperless, eliminating single-use plastics) were known to 47 students (~30%). This could include measures like banning plastic straws or incentivizing double-sided printing, etc. Not everyone knows about these, suggesting such programs could be more visible.
- **Water conservation or reuse initiatives** were noted by 39 students (~25%). This might include low-flow fixtures, rainwater harvesting, etc., but clearly not widely recognized.
- **Greenhouse gas (GHG) emission reduction efforts** (like carbon neutrality pledges, heating upgrades, etc.) were mentioned by 36 students (~24%).
- **Student-led extracurricular green activities** (such as sustainability clubs, community gardens, environmental volunteering) were also recognized by 36 students. This is interestingly on par with GHG reduction awareness. It could imply that formal administrative initiatives are as visible (or invisible) as student club activities.
- **None:** 23 students (15%) said they were not aware of any of the listed actions at their campus. This highlights an engagement gap – a segment of students either isn’t tuned in to campus sustainability or possibly their campus has very few initiatives to notice.

- **Other:** Only 8 students added something else, likely very campus-specific initiatives (one comment mentioned wanting more recycling points and designated smoking areas away from buildings to improve campus environment, implying possibly they weren't aware of such existing facilities).

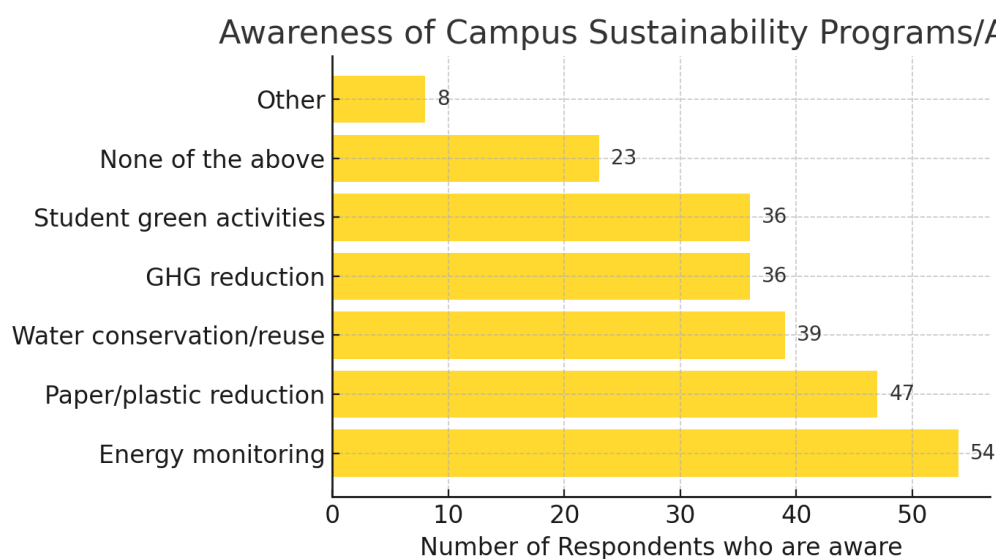


Figure 9: Number of students aware of various campus sustainability initiatives at their university. Many students are unaware of specific programs, suggesting a need for better communication or expansion of these initiatives.

The relatively low awareness levels suggest two possible issues: either some initiatives do not exist or are limited (so there's nothing for students to see), or if they do exist, they are not well advertised or not engaging students. For instance, a campus might have a carbon management plan on paper without visibly involving students. The **15% who see nothing** is a concern – universities should ensure that *at minimum*, students can easily learn about (and hopefully participate in) their campus's sustainability efforts.

Top Priorities for Green Campus Actions: The survey then asked students to choose up to three actions that should be top priority to implement or improve on campus *immediately*. Figure 10 presents the results, which show clear favorites:

- **“Biodiversity and green spaces”** slightly topped the list with 66 votes. Students want greener campuses – more trees, gardens, biodiversity initiatives. This likely ties to

quality of life and visible change (e.g., creating pleasant, sustainable environments with co-benefits for well-being).

- **“Recycling and waste management”** was next with 63 votes. Despite many campuses having some recycling, students still see room for improvement in waste segregation, reduction, composting, etc. It’s a very tangible action they interact with daily.
- **“Renewable energy use”** was essentially tied with the above (62 votes) . Students prioritize switching campus energy supply to renewables (solar panels on buildings, green electricity procurement, etc.) or using more clean energy technologies. This directly impacts GHG emissions, even if students didn’t pick “GHG reduction” explicitly as often – they expressed it via this concrete action.
- **“Well-being and mental health initiatives”** received 52 votes. Although well-being is not always immediately associated with environmental sustainability, Unite!’s Green Campus concept explicitly includes the social and human dimension of sustainability. Students clearly agree that improving mental health resources, relaxation spaces, or related programs is a priority, especially after COVID-era stresses. A green campus is one where humans thrive as well.
- **“Sustainable transport (e.g., bike lanes, electric shuttles)”** Many students (41 votes) see transport as an area for improvement – whether it’s bicycle infrastructure, encouraging public transit, or campus e-mobility solutions. This is both an environmental and convenience issue for students.
- **“Monitoring and minimizing water usage”** got 28 votes, indicating water conservation, while important, is not as urgent in students’ minds as energy or waste (perhaps because European campuses generally have adequate water – the urgency may be lower or less visible).
- **“Reducing GHG emissions”** per se was selected by only 22 students, the lowest of the provided options. This somewhat counterintuitive result might be because “GHG reduction” is an outcome of many other actions (renewables, transport, etc.), so students preferred to specify those actions. It might also reflect that a generic phrase like “reducing emissions” felt too abstract compared to more concrete items.

- “Other” received no significant input, suggesting the list covered the main ideas.

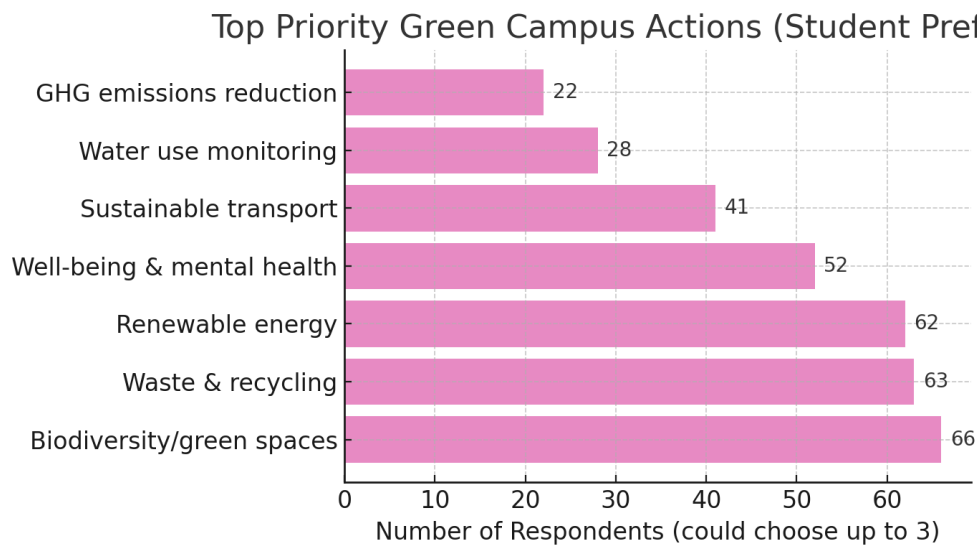


Figure 10: Student-chosen top priorities for Green Campus actions to implement. Greening the physical campus (biodiversity) and operational measures (waste, energy) are most urgent, followed by well-being. Generic “reduce emissions” on its own resonated least.

These priorities provide a **roadmap for campus improvements** from the student perspective. Quick wins might include: planting trees and creating green lounges/outdoor study areas, overhauling recycling bins and awareness, installing visible renewable energy devices (solar panels or solar charging benches), and investing in mental health and well-being programs (which could be framed as part of social sustainability). The relatively lower emphasis on “water” and “GHG” doesn’t mean students find them unimportant; rather, they might trust those will follow or be less directly noticeable to them. As one student wrote, *“most spaces on campus have a lot of room for improvement and not enough action is being taken”* – indicating that across the board there is a feeling that more could be done.

Transparency and Accountability: Another question asked students if they agree that the university should **publish key sustainability performance data (KPIs)** – e.g., energy use, carbon emissions, waste generated, water consumption – to increase transparency, as recommended by the Green Standards. The response was overwhelmingly positive: **71%** agreed or strongly agreed that such data should be published regularly. An additional 13% indicated *“the university already does this (and I’m aware of it)”* – which is notable; some students, particularly from KTH and TU Darmstadt, might have seen annual sustainability reports. Only ~3% disagreed, and ~13% were neutral. This indicates students appreciate

transparency and likely would engage with such information. Publishing sustainability KPIs could be a way to both showcase progress and spur competition or involvement (for example, if energy stats are public, students might be motivated to help improve them). It appears a portion of students believe their university is already doing this; whether that's accurate or just perception isn't certain, but at least those individuals feel informed.

Willingness to Contribute: We have seen that 54% said they would volunteer or participate in green campus actions and another 35% “might” (only 11% would not). In practice, harnessing this goodwill requires making volunteer opportunities accessible and rewarding. Students could join green teams, help organize sustainability days, or participate in living lab projects that make campus changes. Given that lack of engagement was identified as a barrier by some, leveraging the willing majority to inspire the less engaged will be important.

In summary, students want a **visibly greener, more sustainable campus** – from infrastructure to operations – and they want to know about it and be part of it. Improving communication (transparency reports, signage for sustainability initiatives, celebrating successes) can help address the awareness gap. Meanwhile, focusing on the priority actions students identified will ensure that effort is spent where it matters most to the community. The alignment is quite good with Unite!'s Green Campus KPIs (energy, waste, emissions, water, well-being): students basically validated those, with some prioritization. The emphasis on biodiversity/green space and mental health also reminds us that a sustainable campus is also an enjoyable, healthy place to study.

10. Implementation Barriers and Support Needed

Even with strong student support for sustainability initiatives, universities face challenges in implementing changes. The survey sought students' perspectives on the **biggest barriers** to the green transition at their institutions, as well as how they think the implementation should be approached.

Perceived Barriers: Students could select multiple factors they see as hindrances to implementing green plans on campus. Figure 11 summarizes their views:

- **Lack of funding** was the top-cited barrier (71 votes). This aligns with a common reality: sustainability projects often require upfront investment (for new infrastructure, technology, program development) and if budgets are tight, green initiatives may be delayed. Students recognize that without dedicated funding or financial support, even well-intentioned plans can stall. This underscores the need for universities to allocate budgets or seek external funding for sustainability – something students likely would advocate for.
- **Limited engagement or buy-in from students/staff** was second (59 votes). Despite many students personally being willing, they perceive that overall engagement could be higher. This could include apathy or lack of awareness among peers and employees, or competing priorities making it hard to mobilize the community. Essentially, culture change is needed to get everyone on board with sustainability efforts.
- **Administrative or legal obstacles** (53 votes) was another significant barrier. Bureaucratic procedures, rigid regulations, or slow decision-making can impede sustainability projects. For example, if implementing a solar project involves complex procurement rules, or if there's no policy framework to integrate sustainability into curricula, things move slowly. Students sense that internal bureaucracy or external regulations can be a hurdle.
- **Limited policy support** (38 votes) points to higher-level policy issues – perhaps meaning insufficient mandates or guidance from either university leadership or government education policy to prioritize sustainability. Students might feel that if sustainability isn't in the strategic plan strongly, it won't happen ("soft" commitment). Alternatively, this could mean national-level support or incentives are lacking.

- **Technical or infrastructural limitations** (37 votes) were noted. Some campuses might have old facilities that are hard to retrofit, or lack expertise to implement complex solutions, which can be a barrier. For example, a historic campus may not easily accommodate certain green technologies, or technical know-how for specialized sustainability projects might be limited.
- **Resistance to change or skepticism about sustainability** (37 votes) was equally cited. This is about mindset – some faculty, staff, or even students may not believe in the urgency of sustainability or may resist changes that affect their routines (e.g., if asked to change teaching methods, or give up convenience like driving or printing). Overcoming skepticism or inertia is often a social challenge in institutions.
- **Other** had no notable entries, implying the above covered most issues.

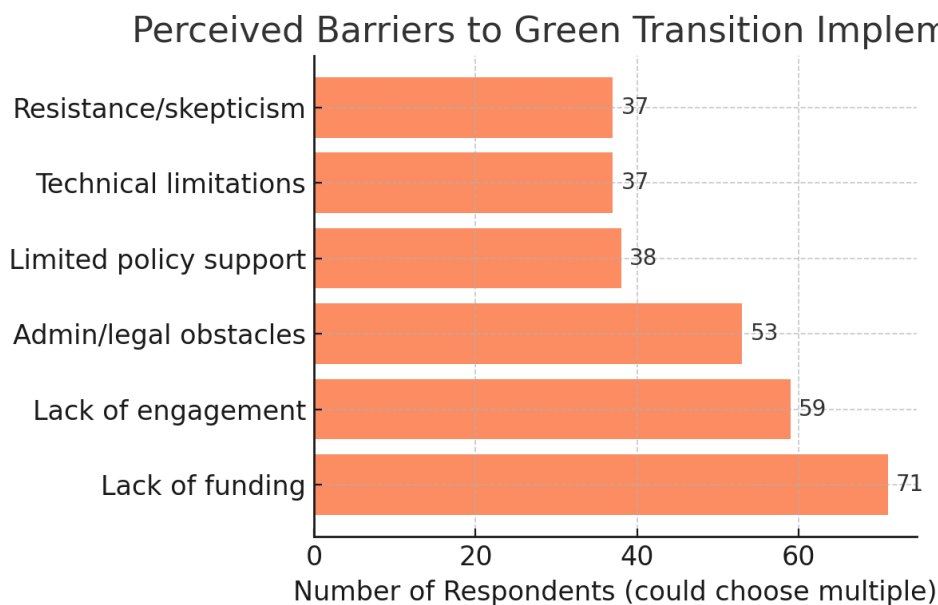


Figure 11: Student-identified barriers to implementing green transition plans. Funding is by far seen as the biggest hurdle, followed by community engagement and bureaucratic/structural obstacles.

These responses highlight that **resources (financial and human) and institutional will are critical**. Even the best ideas will falter without funding and broad support. Students seem aware of the complex interplay of factors – it's not just one thing, but funding cuts across many issues

(with money, one can invest in infrastructure, hire sustainability staff, run engagement programs, etc., which in turn could alleviate other barriers).

Preferred Implementation Approach: Students were asked how, in general, green initiatives should be rolled out at their university: - A **majority (56%)** opted for **“in structured phases (e.g., pilot projects, then campus-wide)”**. This indicates students appreciate a planned, stepwise approach: test an initiative on a small scale, evaluate, then expand. It suggests they understand the value of learning from pilots and gradually scaling up successful solutions, which is a prudent approach to change management.

- **“Gradually”** was chosen by 22%. This is somewhat similar to phased, but implies a continuous, slower change without distinct pilot phases. Combined, it shows most prefer an evolutionary (not revolutionary) change – building momentum over time rather than forcing abrupt shifts.
- **“All at once, if feasible”** was only 12%. A minority would like to see a rapid, comprehensive rollout of changes (perhaps those who feel time is short for climate action). But most others likely think that’s unrealistic or too disruptive.
- **“No preference”** was 11%. These respondents might trust the administration to decide the best approach or didn’t feel strongly about the methodology, only the outcomes.
- Hardly anyone chose “Other,” so it seems the structured approach covers what they imagine.

This consensus on a **phased implementation** approach is actually helpful guidance: it implies that students would be patient with and supportive of pilot programs and iterative improvement. They likely expect communication about these phases and pilot results. Universities can leverage this by involving students in pilot projects (e.g., as volunteers or research assistants) and then showcasing successes to build support for wider adoption.

Support and Engagement: To overcome barriers, universities will need to: - **Secure funding:** possibly by earmarking budget for sustainability, applying for grants (students might support initiatives like a green student fee or crowdfunding specific projects if involved). - **Increase engagement:** through awareness campaigns, integrating sustainability into student life (competitions, events), and providing roles for students/staff in the process (green ambassadors, etc.). Given so many students said lack of engagement is a barrier while many also said they

personally would participate, bridging that gap could involve peer-to-peer outreach or visible leadership commitment to inspire more participation. - **Streamline procedures:** Leadership can signal that sustainability is a priority by cutting red tape (for example, fast-tracking sustainability project approvals, or creating a dedicated task force with decision-making power). Students and academic staff often experience bureaucracy in their attempts to run projects (like a student trying to start a campus garden might run into administrative hurdles); addressing those would remove frustration and delay. - **Educate to combat skepticism:** Some resistance stems from lack of understanding. By educating all campus members on why changes are needed (perhaps via workshops, seminars, or including sustainability in staff training), the university can build a shared sense of purpose.

Final, open comments from students echo these barrier concerns. One wrote *“The hardest part is to start. If people who are implementing Green Standards... are passionate, then others will follow.”* This speaks to the need for champions and enthusiastic implementers to overcome inertia. Another comment (translated from Spanish) noted that there is *“a lot of misinformation or it doesn’t correctly reach students...,”* stressing that communication channels need improvement so students actually hear about what’s being done and why.

In conclusion, students recommend a thoughtful but active approach: **plan, pilot, prove, and then scale** – while ensuring the community is onboarded and resources are allocated. If these conditions are met, students are ready to support and partake in the university’s green transition journey.

11. Open-Ended Feedback Highlights

At the end of the survey, respondents had the opportunity to share additional thoughts regarding the implementation of Green Standards in research, teaching, and campus life. Although only a modest number of students chose to leave written comments, their insights add depth and context to the quantitative results. Several clear themes emerged from their responses:

- **Integrate Sustainability for All, but Tailor Approaches** A recurring idea was that sustainability should be integrated across all programs, but not applied uniformly without regard for disciplinary context. One student cautioned that *“some fields are so far from sustainability-oriented... that including sustainability as modules in existing courses feels forced.”* Instead, they argued that the best approach is *“to make sure it is addressed as an integrated part of culture and lifestyle,”* emphasizing relevance rather than one-size-fits-all requirements. This aligns with broader calls to embed sustainability in ways that reflect each field’s actual environmental impact and professional practice.
- **Mandatory Courses vs. Embedded Content:** Students offered differing views about whether sustainability should be required or offered more flexibly. Some strongly supported compulsory instruction, writing: *“Sustainability courses should be mandatory for all programs... preferably both in the first year and in the later ones.”* Others raised concerns about imposing such requirements, suggesting instead that sustainability topics should be incorporated creatively—*“incorporate it in a more fun way that actually might engage students such as guest lecturers.”* This tension reflects the challenge of ensuring universal exposure while respecting students’ diverse interests and program structures.
- **Visible and Practical Campus Changes:** Many comments linked sustainability education to the physical and operational environment of the campus. Requests included *“more recycling points and specific spots for smokers, more trees planted to create a greener space,”* and broader suggestions such as *“a car-free campus”* and *“more sustainable food offers.”* These ideas indicate that students see campus infrastructure and daily-life practices as essential demonstrations of the university’s commitment to green values.

- **Balance Sustainability With Student Well-Being and Academic Needs:** Several respondents emphasized that sustainability initiatives must avoid harming student welfare or academic quality. One student criticized energy-saving measures that reduce access to campus facilities, noting that *“buildings and study spots are being closed... this worsens the study environment.”* Another pointed out that *“in-person meetings and therefore travel are extremely important for research, teaching, and campus life,”* cautioning against blanket restrictions on academic mobility. Together, these comments highlight the need to weigh environmental goals against equity, access, and the realities of academic work.
- **Motivation and Communication Challenges:** A number of students reflected on varying levels of interest among their peers. As one put it, *“a lot of people are not quite interested... so it’s important to show the benefits to motivate them.”* Another respondent commented (in Spanish) that *“hay mucha desinformación... las actividades no llegan correctamente a los estudiantes,”* pointing to communication gaps about sustainability opportunities. These insights suggest that universities may need to improve outreach and engagement strategies to build broader participation.
- **Universities as Role Models for Sustainability:** Many respondents expressed a desire for universities to lead by example. One student wrote explicitly: *“Our universities should take over a role model position to show how changes can be implemented.”* Others called for the campus to serve as a testbed for innovation, arguing that the university environment has *“room for innovative and out-of-the-box ideas which can be applied to help fighting climate change.”* Students clearly expect institutions not only to teach sustainability, but to embody it.
- **Strong Support for Action — With Calls for Follow-Through:** Several comments expressed clear enthusiasm for the Green Standards initiative. Respondents described implementation as *“a vital step”* and emphasized that *“it should be monitored for proper implementation.”* Others encouraged expanding opportunities for involvement, such as creating groups of specialists who *“work on increasing our university’s sustainability and recruit students to help with the projects.”* The sentiment is broadly supportive but focused on ensuring visible progress and meaningful participation.

Overall, the open-ended responses reveal students who are engaged, reflective, and eager for real change. They support sustainability initiatives but urge universities to pursue them thoughtfully—balancing ambition with practicality, relevance, and care for the academic community.

12. Conclusions and Recommendations

The needs analysis clearly demonstrates that Unite! students are *ready and eager* for a deeper institutional commitment to sustainability. Their responses align closely with the Unite! **Green Standards** framework – indicating strong student backing for measures in research (GR), education (GE), and campus operations (GC). The following sections synthesise key survey insights and present targeted **recommendations** for each area, with the aim of informing WP8 implementation and university-level action plans. These recommendations seek both to satisfy student-voiced needs and advance the Unite! alliance’s sustainability objectives (in line with the SDGs).

12.1. Curriculum and Education

Insight: Students want more substantial and practice oriented sustainability content in their education. Most have had only minimal exposure, and 74% explicitly want more. They favour interdisciplinary, applied learning over superficial or purely theoretical additions. There is strong support for incorporating SDG-related outcomes and for offering new educational opportunities (electives, projects), and a majority declare willingness to participate in such offerings.

Recommendations:

- **Embed sustainability across programs:** Each Unite! university should integrate sustainability and SDG related content into a wide range of courses and programmes. This can include adding case studies, examples or dedicated modules within core disciplinary courses (e.g., sustainable materials in engineering, environmental ethics in computing, life-cycle thinking in economics). Ensuring that every programme features at least one or two learning outcomes linked to sustainability/SDGs (as 62% of students considered important) will institutionalise this integration.
- **Develop new elective courses and micro-credentials:** To respond to the 60% of students willing to take extra SDG related courses, universities should introduce elective, minors and certificate programmes on topics such as renewable energy, climate policy, sustainable entrepreneurship or circular economy. Flexible Delivery formats (e.g., online modules for alliance-wide access, intensive summer schools) will maximise reach and participation.

- **Promote interdisciplinary project learning:** Create project-based courses, challenge-based modules or hackathons in which students from different disciplines collaborate on real sustainability problems (e.g., designing a net-zero energy building, developing a smart campus waste system). This was the top student suggestion and fits well with the *Unite! Living Lab* concept. Projects should ideally be credit-bearing (capstone or design projects) and linked to actual campus or community challenges, generating both learning outcomes and tangible improvements. An annual Unite! Green Challenge, with mixed-university teams competing on SDG themes, could further strengthen this dimension.
- **Leverage external partners in curriculum:** In line with student recommendations, involve industry, local government and NGOs in co-designing and co-teaching sustainability content. Guest lectures, co-supervised projects and mentoring by external partners ensure relevance and provide students with exposure to real world practice. Universities can strengthen networks of “green transition” partners who supply project briefs, data and case studies, thereby enhancing both employability and impact.
- **Consider a foundational sustainability module:** Although a mandatory course was not students’ preferred option, a baseline introduction could still be valuable, especially for those with little prior exposure. One approach is a common online module on sustainability fundamentals (climate science, SDGs, systems thinking) that all first-year students complete, potentially on a pass/fail basis. This could be jointly developed by Unite! partners, ensuring quality while limiting the burden on any single institution. If not mandatory, it can be strongly recommended and integrated into orientation or first-year seminar. An example of such an approach already exists, for example at the Faculty of Sciences of the University of Lisbon, which offers a 3-ECTS introductory sustainability course combining seminars on environmental, social, and economic dimensions with a project-based group assignment. Students work on proposals to improve sustainability on campus, demonstrating how a foundational module can foster both awareness and practical engagement. This model illustrates how partners may implement similar introductory courses adapted to their institutional context.
- **Increase visibility of sustainability in education:** Clearly label and communicate which courses and programmes include sustainability content (for example, create a

special designation or a catalog of “sustainability courses”). Students can then easily find and enroll in them. Highlight success stories of how students applied sustainability knowledge in projects or thesis – this can motivate others.

By implementing these curriculum measures, Unite! universities will respond to clear student demand and equip graduates with the competences required to drive the green transition. These steps directly support the *Green Education (GE-series)* standards, ensuring that sustainability is woven into the educational DNA of the alliance.

12.2. Research and Innovation

Insight: Students expect their universities to lead in sustainability research and broadly support policies steering research towards sustainable outcomes. They particularly endorse monitoring and reducing the environmental impact of research, as well as prioritising funding for sustainability topics. Around 50% of students declare a personal interest in engaging in sustainability research, signalling an important but underused resource.

Recommendations:

- **Articulate a clear research sustainability strategy:** Each university (and Unite! collectively) should adopt a formal policy or strategy for *sustainable research*. This should include explicit targets to reduce the research related carbon footprint (labs, travel, infrastructure) and to increase SDG-related research output. The strategy should be communicated clearly to staff and students so that the direction and rationale are well understood.
- **Fund and incentivize sustainability research:** Allocate internal funding (e.g. seed grants, interdisciplinary calls, PhD scholarships) specifically for sustainability-focused projects. As students note “*funding should support sustainability-focused projects.*” WP8 could coordinate a joint call for proposals in which multi-campus teams address SDG challenges and involve students as junior researchers. Consider awards or other forms of recognition for researchers (including students) whose work advances the green transition or pioneers low-impact research practices. An illustrative example is the Sustainability Ideas Contest at the Faculty of Sciences of ULisboa, now in its 7th edition, which rewards student and staff initiatives that contribute to sustainability. Such schemes demonstrate how internal incentives can effectively stimulate bottom-up

research and innovation in this area. **Monitor and reduce research impacts:** Introduce systems to track the environmental footprint of research activities, such as annual accounting of laboratory energy use or air travel by staff. Use these data to guide concrete reductions for instance, via energy –efficient equipment, promotion of train travel within Europe, or increased use of virtual and hybrid conferences. Student led research spaces (e.g. makerspaces) should also be included, becoming models for green labs.

- **Promote student engagement in research:** Set up structured opportunities for students to contribute to sustainability research. Examples include a Green Transition undergraduate research internship programme across the alliance, thesis topics co-defined with the sustainability office, or student challenge labs focusing on campus sustainability experiments (e.g. evaluating a recycling campaign, biodiversity surveys). Given that half the respondents are interested, well-designed schemes could channel this motivation while building research skills.
- **Create interdisciplinary sustainability research groups or hubs:** Many universities already have centres for sustainability research – ensure students know about them and can participate (through seminars, as research assistants, etc.). If not present, consider forming a student-faculty “Sustainability Innovation Hub” at each campus, where ideas from any field can converge. Unite! can link these hubs for cross-campus collaboration, sharing best practices and perhaps aligning with European research funding opportunities.
- **Reward low-impact research practices:** Even though some students were less enthusiastic about this, it is still important to encourage sustainable norms. Develop guidelines for sustainable conferencing (virtual by default when appropriate, multi-hub formats to reduce long-distance flights) and highlight departments or groups that significantly reduce travel or implement greener lab protocols. Framing this positively—through recognition, awards and communication rather than strict mandates—will help avoid resistance and encourage gradual culture change.

Aligning research incentives and operations with sustainability will reduce the universities’ environmental footprint and accelerate knowledge creation for societal

transformation. Involving students in this research journey prepares the next generation of researchers and innovators to continue the work. These recommendations are closely aligned with the Green Research (GR-series) standards, promoting more sustainable research processes and outputs.

12.3. Campus Operations and Infrastructure

- **Insight:** Students value existing green campus efforts but many are unaware of them. They have clear priorities: greening the campus (biodiversity), improved waste management, greater use of renewable energy and stronger support for well-being. Better transport options and water efficiency also feature prominently. Students strongly call for more transparency about campus sustainability performance. At the same time, they perceive lack of funding as the main barrier, making strategic allocation of resources critical

Recommendations:

- **Invest in visible green infrastructure:** Direct resources to projects that simultaneously improve sustainability and student quality of life. For example:
- Plant trees, create more green spaces, urban gardens, or green roofs on campus (addressing the top priority). Consider involving students in planning and maintaining these spaces (perhaps via biology or architecture departments).
- Expand and clearly label recycling and compost facilities. Ensure every building has well-marked sorting bins and run informational campaigns on how to use them properly (possibly student-led campaigns, which can also boost engagement).
- Install renewable energy technologies on campus – solar PV panels on rooftops, solar charging stations, small wind turbines if feasible – and use them as educational showcases (display panels showing energy generated). Students notice these efforts, and it directly responds to their call for more renewable energy use.
- Improve facilities for sustainable transport: e.g., add bike lanes through campus, secure bike parking, electric shuttle buses between campus sites or to public transit hubs, and incentives for biking or carpooling. Students will more likely choose green transport if it's convenient and safe.
- **Enhance well-being and social sustainability on campus:** Recognizing that students linked mental health and well-being to a “green” campus, universities should bolster

support systems and spaces. This can include quiet green areas for relaxation, wellness centers, and programs addressing stress and inclusivity. Such initiatives (though not traditional environmental measures) fulfill the holistic concept of sustainability and were explicitly prioritized by students. They also increase student engagement and success, which in turn fosters a community more receptive to broader sustainability values.

- **Implement data-driven sustainability management:** Following student advice on publishing data, universities should **track key sustainability metrics** (energy, water, waste, emissions) and report them publicly (e.g., on a dashboard or annual report). If some universities already do this, share best practices across Unite!. Transparency will drive accountability – students and staff can see progress or lack thereof. It can also be used as an educational tool (e.g., integrate real campus data into coursework or student projects to propose improvements).
- Additionally, set concrete targets for these KPIs (for instance, carbon neutrality by 2030, zero waste by 2025, etc., if not already set) and align them with Unite! Green Label criteria. Communicate progress toward targets regularly to maintain momentum. As an example, the Faculty of Sciences of ULisboa has developed an SDG-based indicator framework with targets set for 2030, demonstrating how institutions can define discipline-appropriate goals within broader sustainability ambitions. Such approaches illustrate that KPI setting is a recommendation rather than a uniform requirement and could be adapted to the specific operational and research realities of faculties and/or laboratories.
- **Use campus as a living lab:** Encourage pilot projects on campus that test sustainable solutions in real life. Many could be initiated as part of coursework or research (tie-in with the research engagement recommendation). For example, pilot a building energy retrofit with student monitoring, or a smart irrigation system run by an IoT student project. **Phased implementation** is exactly what students favor – use one dorm or one lab as a pilot for green retrofits, then scale up successful interventions. Make sure to involve students in design and evaluation; this will increase acceptance and awareness.

- **Secure funding and partnerships for campus projects:** Since lack of funding is a major barrier, pursue innovative financing: government grants (many countries fund university greening projects), private sponsorships (a company might sponsor solar panels or a green lounge), or energy performance contracting (where savings pay for upgrades). Engage alumni or local donors who are passionate about sustainability. Unite! as an alliance could also apply for EU funds together for joint campus sustainability initiatives. Emphasize to decision-makers that these investments have educational and reputational returns, not just environmental benefits.
- **Improve communication and engagement:** A recurring theme is that not all students are aware of efforts. Therefore:
- **Launch communication campaigns** about what the university is doing (e.g., social media highlights: “Did you know our campus cut energy use by 10% last year? That’s equivalent to X tons of CO₂!”).
- **Organize *Green Campus Days*** where ongoing projects are showcased (tours of the solar installations, talks by the sustainability office, etc.).
- **Provide easy channels for students to give feedback and suggestions on campus operations** (could be via an app or a forum). Students should feel their observations (like a dripping tap or lack of recycling bin) can lead to action.
- **Support and publicize student sustainability clubs and events**, as they are crucial in peer-to-peer engagement. Ensure these groups have modest funding and institutional support, as they often drive creative initiatives and keep enthusiasm high.

Through these actions, campuses will become living examples of sustainability – something students can see and participate in daily. This directly supports the *Green Campus (GC-series)* standards, which emphasize sustainable campus management, monitoring via KPIs, and stakeholder engagement in the process. If students see their priorities being addressed – more trees, cleaner waste practices, solar panels going up – it will validate this needs analysis process and encourage further engagement.

12.4. Change Management and Involvement

Insight: Students advocate for a structured, phased approach to implementing changes and highlight engagement as both a barrier and solution. They themselves are a willing resource

(majority ready to volunteer or participate in initiatives) that can be mobilized. Overcoming inertia and skepticism requires passionate leadership and inclusive processes.

Recommendations:

- **Adopt a phased implementation roadmap:** Each university, in coordination with Unite! WP8, should develop a clear timeline for rolling out sustainability initiatives in phases (short-term wins, medium-term projects, long-term goals). For example, Phase 1 (next 1–2 years): implement easiest changes (LED lighting, eliminate single-use plastics, integrate sustainability intro in all orientation courses), Phase 2 (3–5 years): larger investments (solar roofs, curriculum overhaul in all programs, etc.), Phase 3 (5–10 years): approach targets like carbon neutrality, zero waste. Share this roadmap with the campus community so everyone knows what to expect and can contribute appropriately at each stage.
- **Pilot projects as exemplars:** As suggested, start with pilot projects. Ensure pilots have clear evaluation metrics and share results transparently. If a pilot succeeds (e.g., a composting program in one cafeteria reduces waste by 50%), use that data to justify scaling up alliance-wide. If something fails, learn and adjust – students will accept iteration if they see honesty and improvement.
- **Maximize student and staff involvement:** Create formal roles and informal opportunities for the community to contribute:
- Establish a **Green Campus Task Force or Council** at each university that includes student, faculty, and staff representatives (possibly those who responded passionately in this survey would join). This group can advise on priorities, help implement initiatives, and act as sustainability ambassadors within their networks.
- Provide training or support for interested students/staff to lead mini-initiatives (for instance, train volunteer “energy champions” in each dorm or lab who promote energy saving).
- Recognize contributions – e.g., introduce a Green Volunteer Certificate or awards that students can earn for volunteering X hours on sustainability projects, which they can put on their CV.

- **Address skepticism through dialogue:** For those resistant, open channels for discussion. Maybe hold town hall meetings on planned changes (like if parking policies will change to encourage biking, let people air concerns and provide alternatives). Emphasize common goals – often skepticism is reduced when people feel heard and see that plans still meet their core needs (for example, ensuring that crucial travel is still allowed while trimming excess, to address the concern raised about travel). Education campaigns highlighting the benefits (financial savings reinvested in education, health benefits of green spaces, etc.) can sway doubters by connecting sustainability to things they value.
- **Leverage the Unite! network:** Unite! Provides a platform for cross-campus learning and motivation:
- Systematically share success stories and transferable practices.
- Consider an online Unite! Green Transition platform where stakeholders can exchange experiences and practical tips.
- Explore alliance-wide challenges or collective targets to foster a sense of shared purpose and healthy competition.

Monitor progress and adjust: Use this needs analysis as a baseline and track changes over time through short pulse surveys or feedback tools. Regularly assessing whether initiatives are visible, valued and effective will allow for adjustments and ensure continued alignment with stakeholder expectations.

By involving the community and phasing changes in thoughtfully, universities can reduce the risks of resistance and cultivate a culture in which sustainability becomes integral to institutional identity. Early successes will foster buy-in, enabling more ambitious steps and ultimately leading to transformative, widely supported change.

Closing Remark: This report conveys a hopeful message: Unite! students want their universities to be leaders in sustainability and are ready to contribute actively. From curriculum and research to campus operations and governance, they have provided a clear mandate and

practical ideas. The recommendations presented here, grounded in their feedback, are intended to translate this mandate into concrete action. As WUST and its partners validate milestone MS20 through this publication, the true measure of success will lie in the extent to which these insights drive real change on the ground. If the student-driven recommendations are implemented, Unite! universities will not only meet but likely exceed the Green Standards – powered by an active, engaged academic community. This partnership between students and university leadership will help ensure that a sustainable campus is not merely an inspiration, but a lived reality across the alliance, inspiring others beyond.