



UNIVERSIDADE CATÓLICA PORTUGUESA

# Sustainability on University Campuses

Progress in Environmental Sustainability at the  
Portuguese Catholic University, Porto

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Católica Porto Business School  
April 2025



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Progress in Environmental Sustainability at the  
Portuguese Catholic University, Porto

Dissertation presented to Universidade Católica Portuguesa to obtain a master's  
degree in Management

by

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# Resumo

As Instituições de Ensino Superior são fundamentais para a transição para um mundo mais sustentável enquanto estabelecimentos de ensino, motores do progresso científico e detentoras de estruturas físicas significativas. As suas atividades de investigação são essenciais na procura de soluções inovadoras para os desafios da sustentabilidade, uma vez que funcionam como laboratórios vivos.

Dada a importância global da sustentabilidade, as universidades estão a alinhar as suas atividades com os Objetivos de Desenvolvimento Sustentável. Este estudo analisa os esforços da Universidade Católica Portuguesa no Centro Regional do Porto para a sustentabilidade ambiental, apresenta as perceções da sua comunidade académica sobre esses esforços e fornece recomendações para melhorar o desempenho da universidade neste âmbito, contribuindo para a ampla discussão sobre o desenvolvimento de universidades sustentáveis.

Para este fim, foi realizado um estudo de caso, foram analisados documentos publicados pela Universidade e realizadas entrevistas para recolher informações sobre as iniciativas sustentáveis implementadas e aplicados inquéritos à comunidade académica para avaliar as suas perceções sobre essas iniciativas.

Os resultados indicam que a Universidade tem desenvolvido iniciativas significativas no ensino, na investigação e nas estratégias de gestão de água, energia e resíduos. No entanto, os sistemas alimentares, de transporte e de planeamento e administração necessitam de um maior desenvolvimento para alcançar a sustentabilidade. Além disso, este estudo recomenda melhorar as estratégias de comunicação, envolver a comunidade académica e desenvolver um quadro centralizado para fortalecer a cultura sustentável no campus.

Palavras-chave: sustentabilidade; universidade; iniciativas sustentáveis; Universidade Católica Portuguesa.



# Abstract

Higher Education Institutions are critical to the transition to a more sustainable world as educational institutions, drivers of scientific progress, and owners of significant physical infrastructure. Moreover, their research activities are essential in the search for innovative solutions to sustainability challenges, as they act as living laboratories.

As sustainability becomes a priority on the global agenda, universities are aligning their activities with the Sustainable Development Goals. This research analyses the environmental sustainability efforts of the Portuguese Catholic University, Porto Regional Center, presents the perceptions of its academic community in relation to these efforts, and provides practical recommendations to improve the University's sustainable performance, contributing to the broader debate on sustainable campus development.

To this end, a case study was applied, published University documents were analyzed, interviews were conducted to gather more information about the sustainable initiatives implemented, and a survey was administered to the academic community to assess their perceptions of these initiatives.

Findings indicate that the University has undertaken significant sustainability initiatives in teaching and research programs and in water, energy and waste strategies. However, other impact areas such as food systems, transportation, planning and administration require further work to achieve sustainability. In addition, this study highlights the need to improve communication strategies, involve all University stakeholders, and develop a centralized sustainability framework to strengthen sustainability culture on campus.

**Keywords:** sustainability; universities; sustainable initiatives; Portuguese Catholic University



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# Abbreviations

HEIs – Higher Education Institutions

SDGs – Sustainable Development Goals

UCP-CRP – Portuguese Catholic University, Porto Regional Center

SD – Sustainable Development

UI-GMR – UI GreenMetric World University Rankings

STARS - Sustainability Tracking, Assessment & Rating System

ZEV – Zero Emission Vehicles

LEED – Leadership in Energy and Environmental Design

HVAC – Heat Ventilation Air Condition

PV – Photovoltaic

GHG – Greenhouse Gas

IT – Information Technology

INSURE.hub – Innovation in Sustainability and Regeneration Hub

LED – Light-Emitting Diode

STCP – Sociedade de Transportes Coletivos do Porto



# Introduction

Higher Education institutions (HEIs) are strongly committed to the fight against climate change, aligning their missions with the Sustainable Development Goals (SDGs) (Gwilliam et al., 2023). This commitment stems from the universities' role as key agents in the transition to a more sustainable world (Sugiarto et al., 2022), as they are responsible for educating future leaders, raising community awareness, conducting R&D, and consuming a large amount of resources (Amaral et al., 2020).

This engagement in the fight against climate change and, consequently, with the SDGs is frequently mentioned in HEIs communications and strategic documents. The academic community perceives this as universities committing to sustainability. However, the simple discursive alignment of university communications with the SDGs is insufficient to achieve a sustainable campus. The SDGs are a reliable guide for sustainable transformation processes; however, they are not in themselves a solution to sustainability issues (Cuesta-Claros et al., 2023).

Despite the urgency of this commitment, many universities are lagging in their transition to more sustainable campuses, because their managers and professors do not incorporate the SDGs in their management or teaching activities, due to the lack of necessary guidance on how to do so (Leal Filho, Shiel, et al., 2019).

Several studies have individually analyzed the environmentally sustainability action plans of different universities (Omotosho et al., 2023; Leal Filho, Shiel, et

al., 2019; Duarte et al., 2023; Araújo et al., 2023; Sugiarto et al., 2022; Abakumov & Beresten, 2023), the sustainability performance of universities in different areas of intervention (such as energy, waste, water, etc.) (Mac-lean et al., 2022; Castrillón-Mendoza et al., 2020; Mohammadalizadehkorde & Weaver, 2020; Tarnini et al., 2023; Cruz et al., 2023; Pereira Ribeiro et al., 2021) and the accuracy and effectiveness of sustainability ranking indicators (Zhu & Dewancker, 2021; Abakumov & Beresten, 2023).

The originality of this research lies in the horizontal approach to these topics, summarizing the environmentally sustainable initiatives implemented by several universities and suggested by the environmental sustainability university rankings, in order to provide a comprehensive overview of the steps needed to achieve a sustainable campus. This research objectives are to explore the environmental performance of the Portuguese Catholic University, Porto Regional Center (UCP-CRP), to analyze the perceptions of its academic community and to provide meaningful recommendations to contribute to the University's continuous pursuit of a green culture.

To this end, a case study was applied, published University documents were analyzed, interviews were conducted to gather more information about the sustainable initiatives implemented, and a survey was administered to the academic community to assess their perceptions of these initiatives.

Thus, although the concept of sustainability refers to the holistic development of three interdependent key dimensions – economic, social, and environmental (Abakumov & Beresten, 2023), this research only considers the environmental dimension. Therefore, whenever “sustainability” is mentioned in this study, the term refers to “environmental sustainability”.

The dissertation is structured as follows. Chapter 1 briefly summarizes the literature that supports the research objectives, Chapter 2 explains the methodology used to collect and analyze relevant data, Chapter 3 discusses the

results obtained, and Chapter 4 presents the main conclusions, recommendations, and limitations.



# Chapter 1

## Literature Review

### 1. The role of universities in a sustainable transition

Universities are institutions with a significant number of people commuting to and from campus, consuming a large amount of resources and producing a substantial amount of waste (Araújo et al., 2023). These characteristics justify the importance of implementing green technical measures on campus (Popescu et al., 2020).

Moreover, HEIs are organizations committed to education and research, with an important leadership role in training graduates in the principles of Sustainable Development (SD) (Valls-Val & Bovea, 2021). Therefore, HEIs should actively encourage the academic community to follow the guidelines of the SDGs and develop applied research around them to find innovative approaches to improve the effectiveness of sustainable transitions (Leal Filho, Shiel, et al., 2019). Campuses should serve as “living labs” in sustainability education and provide experimental learning opportunities for everyone (Xiong & Mok, 2020).

Therefore, as Amaral et al. (2020) summarizes, HEIs play a crucial role in sustainable transformations, mainly due to their characteristics and missions: a) as educational institutions, HEIs are responsible for educating the community to

be more aware and active in the search for a sustainable world; b) as owners of physical structures that consume a significant amount of resources, HEIs have the responsibility to mitigate the negative environmental impacts associated with campus operations; c) as agents of societal change, HEIs must seek the engagement of staff, academia and the community and act by example (Amaral et al., 2020).

## 2. Evolution of universities' sustainability performance

Given the role of universities and their characteristics, they must implement a wide diversity of sustainable measures. Nowadays, HEIs follow university green rankings to assess and to keep track on their environmental performance by taking and reporting action on specific environmental issues (Gwilliam et al., 2023).

University green rankings are an effective tool for evaluating, monitoring and providing information to support accurate decision-making on the current green practices implemented in universities (Anthony Jnr, 2021). There are many international benchmarks used to assess the sustainability progress of HEIs, but the fact that they generally require the availability of a large amount of data poses a challenge for universities to participate in these rankings (Mac-lean et al., 2022).

Since the intention of this dissertation is to provide support to the sustainable transition of UCP-CRP, this research summarizes the environmental indicators of some university sustainability rankings, allowing a benchmarking exercise to be carried out to understand the progress in environmental sustainability at UCP-CRP and the elaboration of a blueprint of practical measures.

The **UI GreenMetric World Rankings** (UI-GMR) allows universities to report their environmental sustainability data by filling in an online questionnaire

which is divided into six main categories: Setting and Infrastructure, Energy and Climate Change, Waste, Water, Transportation and Education & Research (see Table 4 on Appendix A). Each category has a set of indicators that are assigned with different scores and weights (*Welcome to UI GreenMetric - UI GreenMetric*, n.d.) .

The **Sustainability Tracking, Assessment & Rating System** (STARS) allows universities to have a comprehensive insight into the construction of their sustainable strategies through a self-reporting framework. This system focuses on different SD mandatory action categories: academics, engagement, operations, and planning & administration (Zhu & Dewancker, 2021). Table 5 on Appendix A provides a selection of the environmentally sustainable credits of the Technical Manual from the 3.0 version of STARS released in May 2024, which serves as the definitive guide for HEIs to assess and report their sustainability performance (STARS Technical Manual, 2024).

The **Times Higher Education Impact Rankings** are the only performance rankings that assess universities' progress in aligning with the SDGs. Table 5 on Appendix A summarizes the indicators considered by the rankings to assess universities' effectiveness in achieving each of the SDGs directly related to environmental sustainability (Impact Rankings Methodology 2024, 2024). In addition to the SDGs not directly related to environmental sustainability, SDG 14 – Life Below Water and SDG 15 – Life on Land were also excluded from the scope of this research due to their limited practical applicability to the context of university campuses.

The STARS framework was chosen as a guide to provide a comprehensive overview of university green practices due to its detailed and practical approach, making it a valuable tool in the search for relevant information and data collection.

## 2.1 Academics

### 2.1.1 Curriculum and research

HEIs must create a learning system that enables students to understand and integrate the SDGs into the activities they carry out at universities (Omotosho et al., 2023). Providing learners with skills to reflect and assess when certain actions support or jeopardize the achievement of the SDGs will help accelerate their implementation (Leal Filho, Shiel, et al., 2019).

Research on Portuguese university teachers' perceptions of SD demonstrated that they prefer to educate for SD through conferences, seminars or research projects, in line with students' preferences for more practical pedagogical approaches in this area (Leal et al., 2024). Other studies confirmed that most of the inquired universities promote teaching of sustainability through transdisciplinary studies and experimental practices (Duarte et al., 2023) such as through real-world experiment learning and in collaboration with external partners (Tomasella et al., 2023).

To sum up, education for SD must not remain in the context of formal academic education activities once its effectiveness depends on the creation of an ecosystem which involves all the universities' stakeholders (Gwilliam et al., 2023).

Nevertheless, formal academic education towards sustainability must not be forgotten and university curricula must be systematically revised (Leal et al., 2024) to ensure the delivery of sustainability values and ethics, awareness of lean management practices and technical knowledge of how to measure the impact of sustainability initiatives in a company or organization.

The main challenge in integrating sustainability and the SDGs into university curricula is that these topics are not directly related to all subjects. Students in

natural sciences fields will naturally engage with sustainability concepts and have a stronger perception of SD. Therefore, it is necessary to train teachers on sustainability (especially those who teach in scientific fields where the topic is less discussed) so that they can reinforce the topic in the learning process. (Duarte et al., 2023).

## 2.2 Academic Community Engagement

The behavior and involvement of the academic community in the sustainable practices are critical to the successful implementation of a sustainable culture (Araújo et al., 2023).

Many authors have described how to involve universities' stakeholders in the transition to a more sustainable campus. Sugiarto et al. (2022) stated that in order to involve campus communities in this mission, it is necessary to internalize the green concepts in the communities, organize extracurricular programs focused on sustainability, integrate sustainability in all daily activities of the campus and develop control systems over the environmental behavior of universities.

Other authors explained how to motivate sustainability engagement through communication by publishing news about ongoing sustainability events and by advertising established sustainability goals and accomplishments on HEIs' websites; inviting universities' stakeholders to attend sustainability events; and informing applicants and students about campus environmental initiatives at open and reception days (Abakumov & Beresten, 2023).

Since students are usually involved in youth entrepreneurship activities, their sense of engagement can be increased by motivating them to develop viable and scalable solutions to sustainability problems and to implement impactful projects that benefit the communities involved (Omotosho et al., 2023).

Finally, Gwilliam et al. (2023) recommend the following actions to engage the academic community in sustainability: a) establishing communities of practice,

b) supporting sustainability pilot projects, c) engaging with senior leadership (especially in the development of strategic documents), d) developing sustainability-focused training, e) supporting students and staff who present sustainability-focused work at external events, f) providing small grants to motivate students to organize sustainability-focused activities, g) engaging the community in research and innovation projects through civic mission and living labs, h) renewing external partnerships, and i) activating existing channels for sustainability education debate.

## 2.3 Operations

### 2.3.1 Buildings and Grounds

To achieve sustainable campuses, universities must invest in sustainable infrastructure to mitigate the negative effects of their intensive resource consumption (Sugiarto et al., 2022).

Nowadays, there are several well-known certifications that ensure or validate the environmental efficiency of buildings. The most widely used international certification is the *Leadership in Energy and Environmental Design (LEED)* (Maclean et al., 2022). Regardless of the type and phase of building construction (new construction, operations, maintenance and interior fit-out), this certification system focuses on the following parameters: energy use, water use, indoor environmental quality, materials selection, site, and location within the surrounding community (*What Is LEED Certification? – U.S. Green Building Council*, n.d.).

The first step in implementing green buildings is to conduct research into their environmental and economic performance, as this increases the strength of the value proposition for decision-makers to engage with green building standards

by considering indicators such as financial savings, energy intensity, and cost-benefit extents (Mac-lean et al., 2022).

#### 2.3.1.1 Water

Improving the efficiency of clean water use and reducing water consumption are relevant strategies for achieving sustainable campuses. These strategies can be achieved by revitalizing clean water networks, metering the water supply in each building, reusing wastewater, improving the surface water quality, collecting, managing and conserving rainwater (Sugiarto et al., 2022), installing water-efficient appliances, and introducing regular plumbing fixture audits (Soares et al., 2023).

#### 2.3.2 Energy and Climate

HEIs are facing a pressuring demand for energy justified by the use of Heat Ventilation Air Conditioning (HVAC) systems, lighting, computers and office equipment, laboratories, audiovisual equipment, etc. (Castrillón-Mendoza et al., 2020). Therefore, the implementation of feasible clean energy and energy efficiency measures is essential for the sustainable growth of universities (Mohammadalizadehkorde & Weaver, 2020).

Tarnini et al. (2023) found that combining energy sources (diesel generators and renewable energy) to provide electricity to universities is the most viable solution to power universities, as it offers a lower investment, fuel and maintenance costs than systems that rely on a single energy source. This hybrid approach is also suited to the limited space available on campuses, as the installation of photovoltaic (PV) energy systems on university roofs (Castrillón-Mendoza et al., 2020) has been identified as an effective solution to space constraints (Araújo et al., 2023).

HEIs usually implement their energy efficiency and consumption reduction strategies by reconfiguring networks, metering each school or work unit, automating the use of electrical energy in classrooms, regulating public lighting, establishing internal policies that regulate air-conditioning temperatures, and replacing old electrical equipment with energy-saving ones (Sugiarto et al., 2022).

However, these measures can only be effective if universities take additional measures to increase the school community’s awareness of energy efficiency (Araújo et al., 2023).

### 2.3.3 Food and Dining

HEIs’ canteens play a critical role in the transition to a more sustainable food system because they have enormous and centralized purchasing power and feed thousands of people each day.

Table 1 provides a summary of several practices identified by Cruz et al. (2023) that contribute to achieving a sustainable food system within HEIs.

Areas of intervention	Suggested Practices
Awareness and Education	Degrees and academic programs focused on sustainable food systems
	Training/awareness-raising actions on campus
	Community gardens and composting projects
	Cookery workshops for students
	Product sustainability information
University management	Sustainability plans addressing food waste
	Supply improvements: mandatory purchase of sustainable products and services, mandatory use of vegetable milk, gluten-free, vegetarian and vegan products
	Mechanisms for monitoring details included in the contracts
	Training for kitchen staff in health, sustainability, waste management, ecological footprint, etc.
	Sales corners, offering the possibility of taking food home
Canteen Services	Information on seasonal products in cafeterias
	Accessible sustainable products

	App to receive information on campus menu options
	Vending machines with healthy products
	Kitchen refurbishment to facilitate alternative ways of cooking and waste management

**Table 1:** Green practices towards a more sustainable food system

However, the implementation of these practices have some obstacles that need to be considered, such as: a) the prohibitive cost of local and organic food production; b) the lack of a long-term strategy to implement a sustainable food system; c) the lack of coordination between the local and organic food producers, the logistics sector, food service companies, and consumers; and d) difficulties in empowering and engaging student communities (Cruz et al., 2023).

### 2.3.4 Procurement and Waste

Public procurement can help drive the transition to a more sustainable world by promoting green purchasing (Cruz et al., 2023). An environmentally sustainable procurement strategy can be defined as the acquisition of goods and services that seeks to minimize the environmental impact of their production, use and disposal. The selection of these products is based on energy efficiency, recyclability, durability, reduced maintenance time, low toxicity, and minimal packaging principles (Leal Filho, Skouloudis, et al., 2019).

Leal Filho, Skouloudis, et al. (2019) summarized the following university sustainable procurement measures: a) optimizing the consumption of natural resources in procurement decisions; b) effectively managing the waste in the university supply chain; c) effectively managing the delivery of goods and services to the university; d) providing advice to the academic community on how to implement sustainable procurement; and e) ensuring that all university departments follow a sustainable approach in their purchasing decisions.

During their daily activities, teachers, staff and students generate a large amount of waste, which justifies the need to implement waste management and

recycling programs on campus, especially a specific strategy to reduce the use of paper and plastic (Abakumov & Beresten, 2023).

There are several measures that can contribute to the successful implementation of a waste management strategy: a) establishing a campus waste management organization, b) improving waste treatment infrastructure, c) implementing an online monitoring system, d) implementing zero-waste programs, e) incorporating the 3Rs (Reduce, Reuse, and Recycle) at the core of university operations, f) implementing a waste segregation strategy on campus (Budihardjo et al., 2021), avoiding disposal in open landfills (Abakumov & Beresten, 2023); g) implementing Information Technology (IT) and e-learning applications to reduce the consumption of paper; and h) organizing waste management activities in cooperation with the surrounding communities allowing the sharing of knowledge on this matter (Sugiarto et al., 2022).

### 2.3.5 Transportation

HEIs are characterized by the fact that thousands of people commute on a daily basis and therefore have a tremendous negative environmental impact (Becker & Carmi, 2019).

Hence, one strategy to achieve a sustainable campus is to develop a sustainable transportation system by researching the design of green transportation devices, planning transportation, collaborating with other relevant organizations, and developing supporting infrastructure and facilities (Becker & Carmi, 2019).

A commonly implemented solution to discourage solo driving and reduce its environmental negative impact is the establishment of a parking fee (Becker & Carmi, 2019). However, it is important to implement other measures to achieve a sustainable transportation system, such as: a) promoting shared mobility and new technologies, like a campus exclusive carpooling app (Sobrinho & Arce, 2021)

; b) promoting micro mobility means of transportation (Psarrou Kalakoni et al., 2022); c) creating or expanding a campus bus service; d) coordinating bus service with class schedules (Allen & Farber, 2018); e) creating or expanding bicycle and pedestrian infrastructure (Pereira Ribeiro et al., 2021); f) creating bike-sharing programs for campus users; and g) developing a cycling and walking culture (Mateo-Babiano et al., 2020).

## 2.4 Planning and Administration

University leaders play a crucial role in the implementation of a sustainable campus. They must commit to creating a green culture and systematically reinforce the principles and policies of a sustainable campus (Sugiarto et al., 2022), adopting a holistic approach applicable to all campus activities (Leal et al., 2024).

HEIs' decision-makers must promote sustainability in universities' daily activities and should commit to acting in line with the SDGs. Thus, a more integrated, strategic and holistic approach is mandatory for the successful implementation of a sustainability culture (Leal et al., 2024).

Nevertheless, the existence of national or regional government policies related to campus sustainable transitions is also extremely important for its successful implementation, as a government involvement can provide funding programs, regulatory frameworks, guidelines and standards, and incentivize collaboration and awareness on a larger and longer-term scale (Duarte et al., 2023).

However, in Portugal, there is a lack of national policy in this area, which, together with the fact that Portuguese university leaders are generally unaware of sustainable principles and initiatives, leads to a poor sustainability culture in universities (Duarte et al., 2023).

Therefore, it is crucial that university leaders make public strategic commitments, provide resources to launch sustainability initiatives, monitor

progress and report regularly on sustainability performance (Gwilliam et al., 2023).



# Chapter 2

## Methodology

### 1. Research Method

In order to accurately understand and evaluate the environmental sustainability efforts implemented by the UCP-CRP, and the academic community's perception of them, a case study was conducted in this research. As stated by Yin (2014), a case study "*investigates a contemporary phenomenon (the "case") in depth and within its real-world context*", so it seems to be the most appropriate research method.

First, in order to understand the environmental sustainability efforts of UCP-CRP, some information was retrieved from the University's website, from its strategic plans – Plano de Desenvolvimento Estratégico 2021-2025, Agenda da UCP-CRP para a Sustentabilidade (UCP, 2021), and progress reports – Sharing Information on Progress Report Católica Porto Business School 2023 (UCP, 2023), as this type of evidence source allows the information to be systematically reviewed and may contain specific details of the phenomenon under study (Yin, 2014).

These documents were difficult to retrieve, and no sustainability report related to the entire UCP-CRP was found at this stage of data collection (from January to March of 2024). Moreover, the information retrieved was not sufficient to

effectively compare the UCP-CRP's efforts with those of other universities and with those suggested by university green rankings. As noted by Duarte et al. (2023), Portuguese HEIs are still in a very embryonic stage of sustainability reporting, and only a few universities have published their sustainability reports.

Therefore, it was decided to interview (see Appendix B) the President of the UCP-CRP, Professor Isabel Braga da Cruz, the Director of Partnerships, Alumni and Employability, Dra. Maria Lopes Cardoso, and the Director of Infrastructures, Engineer Isabel Figueiredo, in order to obtain a more insightful perspective (Yin, 2014) on the sustainable practices implemented by the UCP-CRP.

Furthermore, it was also decided to conduct an online survey (see Appendix C) of the University's teachers and researchers, staff and students to assess the perceptions of the University's stakeholders about these practices, given the surveys usefulness in providing a broad overview of perceptions within a population (Yin, 2014).

The case study's strongest advantage is that it can rely on multiple sources of evidence when investigating contemporary events - documents, interviews, and surveys, proving the suitability of this research method in this study. Furthermore, although some data collection methods are more commonly used in other research methods, multiple data collection methods can be used in any given study (Yin, 2014).

## 2. Interview and Survey Design and Administration

Given that the purpose of this research is to study UCP-CRP's sustainability progress through an in-depth analysis of its sustainability practices, to analyze the perceptions of its academic community in relation to these practices and to

provide practical recommendations for improving the University's sustainable performance, the interviews and surveys conducted were designed to be as comprehensive and insightful as possible. Therefore, their design followed the detailed structure of the STARS ranking (STARS Technical Manual, 2024). Nevertheless, a question on the SDGs was added to the survey to assess the awareness of University stakeholders and the alignment of their actions with the SDGs.

The first section of the interview provides context for the interviewee, the second section includes some information retrieved from the strategic plans – Plano de Desenvolvimento Estratégico 2021-2025, Agenda da UCP-CRP para a Sustentabilidade (UCP, 2021), and progress reports – Sharing Information on Progress Report Católica Porto Business School 2023 (UCP, 2023), and the third section includes questions to understand what actions are being implemented by UCP-CRP to achieve a green campus.

The interviews with Professor Isabel Braga da Cruz and Engineer Isabel Figueiredo were conducted through Microsoft Teams, and the one with Dra. Maria Lopes Cardoso was conducted in person, all between March and April 2024.

In turn, the first section of the survey collects demographic and organizational information about the respondents (age, gender, role in the institution, degree and field of study); the second section includes questions about the stakeholders' perceptions of the SDGs and the University's alignment with them; and the third section analyzes the stakeholders' knowledge concerning the UCP-CRP's green practices by asking the respondents to identify them.

The questionnaire was distributed via email, by retrieving students' emails from Outlook and teachers and researchers' emails from the University's website, via University's group chats on social media, and via the transmission of a quick response code in the most visited campus infrastructures, such as the cafeterias

and the atrium, between March 2024 and August 2024. This wide time range is justified by the difficulty of reaching University staff, whose email or other online contact information is not available to students.

All the data was entered into Microsoft excels spreadsheets and analyzed using distributions and percentages.



# Chapter 3

## Discussion

### 1. Environmentally sustainable practices at UCP-CRP

The analysis of the “Católica Porto Business School PRME Sharing Information on Progress Report”, the “Plano de Desenvolvimento Estratégico 2021-2025 (Agenda da UCP para a Sustentabilidade)” and the interviews with the UCP-CRP board member and directors offer a comprehensive overview of the University’s sustainability efforts. The reported measures are consistent with many of the best practices for HEIs’ discussed in the literature review, demonstrating UCP-CRP’s commitment to sustainability.

#### 1.1 Academics

UCP-CRP emphasizes its responsibility to educate its academic community and to involve the University’s stakeholders in the active pursuit of a sustainable world through its diverse and extensive educational programs. In particular, the Católica Porto Business School includes in its portfolio the postgraduate program “Sustainability and Regeneration”, the executive program “Chief Sustainability Officer”, the international program “Global Responsible Leadership for Sustainable Transformation”, and the optional course for masters’ degrees “Sustainability and Business Innovation”.

Additionally, several curricular units incorporate sustainability concepts. For instance, the School of Biotechnology offers curricular units such as “Good Laboratory Practices”, “Food Safety and Quality”, “Environmental Sciences”, “Environmental Technologies”, “Environmental Microbiology”, “Resources and Sustainability”, all of which directly address sustainability topics. Moreover, the University offers to all its students the optional courses related to environmental sustainability “Curricular Unit SDG 13 – Climate Change” and “Curricular Unit SDG 14 – Life Below Water”. These courses enhance the ability of the SDGs to guide sustainable transformative processes (Cuesta-Claros et al., 2023), as they encourage students to evaluate whether specific actions are in line with the SDGs (Leal Filho, Shiel, et al., 2019).

Although the UCP-CRP has already established an academic structure towards sustainability, it should be systematically reviewed to ensure that curriculum content remains in line with the latest findings on sustainability (Duarte et al., 2023).

Nevertheless, the University is extending its sustainability education beyond classroom boundaries, as advised by Gwilliam et al. (2023). The University developed projects such as the “Projeto das Mil Árvores”, which consisted of planting a thousand trees, and “Natureza é a melhor sala de aula”, which encouraged students and teachers to explore learning in nature. Furthermore, the University and the Innovation in Sustainability and Regeneration Hub (INSURE.hub) - a UCP-CRP initiative whose main objective is to create an ecosystem of transdisciplinary knowledge that promotes business solutions with a circular, sustainable and regenerative scope (INSURE.Hub, n.d.) - organize several conferences and webinars focused on sustainability. Such learning approaches are crucial, as Portuguese students and teachers demonstrate a preference for experimental and real-world pedagogical practices in sustainability education (Duarte et al., 2023).

However, despite significant efforts in sustainability education, the UCP-CRP has yet to assess the sustainability literacy of its community.

The University also promotes a sustainability culture through its research activities. Researchers at the Centre for Biotechnology and Fine Chemistry, based in the School of Biotechnology, work in four Thematic Lines aligned with the SDGs: a) “Environment and Resources”, which develops innovative approaches to address sustainability challenges at national and international levels; b) “Food and Nutrition”, which focuses on promoting health and well-being by following EU priorities for safe, nutritious and accessible food; c) “Biobased and Biomedical Products”, which focuses on the growth of bioeconomy and circular economy, reinforcing opportunities for bio-based products; d) “Biotech Innovation and Tech Transfer”, which emphasizes white biotechnology fermentation processes and the efficient use of renewable resources (*Thematic Lines - CBQF - Centre for Biotechnology and Fine Chemistry*, n.d.).

Moreover, the University’s researchers are required to follow a safety and conduct guide that instructs them to follow sustainable management procedures and to conduct their research in an efficient manner (for example, by advising researchers to turn off equipment after use or to use more sustainable chemicals and reagents).

Also, “Ethics and Sustainability” is one of the key research areas of the Research Centre in Economics and Management (CEGE) whose members are committed to translating research findings into business and societal impact through applied labs within the Católica Porto Business School.

Nonetheless, UCP-CRP schools that are not directly linked to the natural sciences fields also demonstrate a commitment to research for sustainability, since a significant percentage of master's degree dissertation themes proposed by faculty members are related to sustainability issues.

## 1.2 Engagement

As community awareness towards sustainability is critical to the successful implementation of sustainable initiatives, UCP-CRP and INSURE.hub host numerous events for university stakeholders on sustainability topics such as sustainable food systems, circular economy, and the role of artificial intelligence in the transition to a more sustainable world.

In addition, training sessions have been conducted in partnership with Lipor to educate cleaning staff on proper waste management, with an emphasis on recycling procedures.

UCP-CRP also uses its communication channels – newsletters, website, social media and posters – to raise awareness about sustainability, promote already implemented measures and encourage sustainable behaviors. For example, posters across campus remind individuals to switch off equipment when not in use.

Nevertheless, the University should promote more youth entrepreneurship initiatives that could inspire students to tackle real-world problems by developing sustainability projects (Omotosho et al., 2023).

## 1.3 Operations

With seven buildings and over six thousand students, the UCP-CRP campus naturally has significant demands for energy, water and other resources, as well as considerable waste generation. Thus, sustainable operational practices are critical to reducing UCP-CRP's environmental impact.

Table 2 summarizes the University's sustainable practices in various operational areas:

Operational Area	Sustainable measures
Buildings & Grounds	New construction and maintenance operations in line with green standards (e.g., through the use of thermal insulation and energy-efficient appliances); creating recreational areas within green spaces; installing water meters to detect leaks; training staff to report anomalies; implementing rainwater harvesting systems; equipping faucets with sensors, timers, and flow reducers; placing awareness signs in bathrooms for water conservation; using bathroom materials designed to prevent pipe obstructions; using automatic toilet flushing mechanisms.
Energy & Climate	Installing energy meters to detect equipment that is turned on but not in use; installing solar PV systems; regulating HVAC temperatures; posting reminders near equipment to turn them off when not in use; instructing staff to turn off equipment when not in use; constructing new buildings with centralized heating controls; replacing standard light bulbs with LEDs (Light-Emitting Diode); replacing old electrical equipment with energy-efficient ones; instructing staff to report irregularities; using centralized controls to prevent equipment from being left on unintentionally; setting timers on equipment to turn off after inactivity.
Food & Dining	Conducting regular meetings with outsourced cafeteria companies to monitor green criteria for food sourcing, preparation, and waste management; designing the arts building

	cafeteria to offer sustainable options, such as vegetarian menus, and to provide meals without using plastic or paper waste containers; hosting conferences on sustainable food systems; publishing research and newsletters on sustainable food practices.
Procurement & Waste	Establishing green compliance criteria for supplier contracts; using green cleaning products; developing a waste management strategy in partnership with LIPOR; prioritizing products with low energy consumption; selecting durable materials and equipment; installing water fountains to reduce plastic bottle use; transitioning to digital teaching platforms to minimize printed materials; using lower-density paper for printing; configuring printers for double-sided and black-and-white printing; donating obsolete materials and equipment; strategically placing recycling bins (e.g., near printers and cafeterias); implementing waste management protocols for science labs and art studios; and creating recycled paper notebooks.
Transportation	Installing charging stations for electric vehicles; providing bicycle parking; working with “Sociedade de Transportes Coletivos do Porto” (STCP) to align bus schedules with class times; and implementing a parking fee.

**Table 2:** Sustainable operational measures implemented by UCP-CRP

UCP-CRP has already taken the first step in implementing a sustainable culture by measuring the environmental and economic performance of its buildings.

The commitment of UCP-CRP is evident in its water and energy conservation and efficiency measures, sustainable food and dining practices, procurement and

waste management strategies, and transportation plans implemented by the University.

However, it is worth noting that the food and dining strategies and transportation intervention areas have significant room for improvement.

Although the arts building cafeteria implements sustainable practices throughout its cooking processes, many other campus cafeterias do not follow these requirements so strictly. Additionally, other initiatives could be implemented to strengthen the sustainability of the University's food systems, such as the development of community gardens to sell fruits and vegetables on campus or to supply these items to the University cafeterias. Similarly, vending machines could offer healthier and more sustainable products (Cruz et al., 2023).

Regarding transportation, although UCP-CRP has already developed some initiatives, further work is required to motivate students to use cleaner transportation options. UCP-CRP could promote an internal carpooling app (Sobrino & Arce, 2021), create bike sharing or rental programs for campus users (Mateo-Babiano et al., 2020), and implement services for the academic community to travel more comfortably, such a University bus that follows a specific city route or having lockers on campus so students can leave their material at the University (Psarrou Kalakoni et al., 2022).

## 1.4 Planning and Administration

An integrated framework is essential for creating a strategic and coordinated approach to sustainability on campus (Robinson & Laycock Pedersen, 2021). It ensures that sustainability initiatives and their underlying investments remain effective over time. Regardless of the methodology chosen to implement this framework, an integrated strategy seems to produce better results rather than isolated actions (Amaral et al., 2020).

As such, sustainability offices have been an asset in facilitating collaboration and alignment on decisions related to sustainability activities (Amaral et al., 2020). Although UCP-CRP does not have a sustainability office, there are teams within a few University departments that are dedicated to addressing sustainability issues.

Moreover, University leaders should clearly communicate the campus sustainability transition objectives and present the results through performance indicators that are easily understood by community members and that illustrate the evolution of the entire process (Araújo et al., 2023). The Portuguese Catholic University has already developed and published a sustainability strategic plan that encompasses all its Portuguese campi. Nevertheless, the sustainability report is still under development and has not yet been published.

## 2. Perceptions of environmental sustainability among UCP-CRP stakeholders

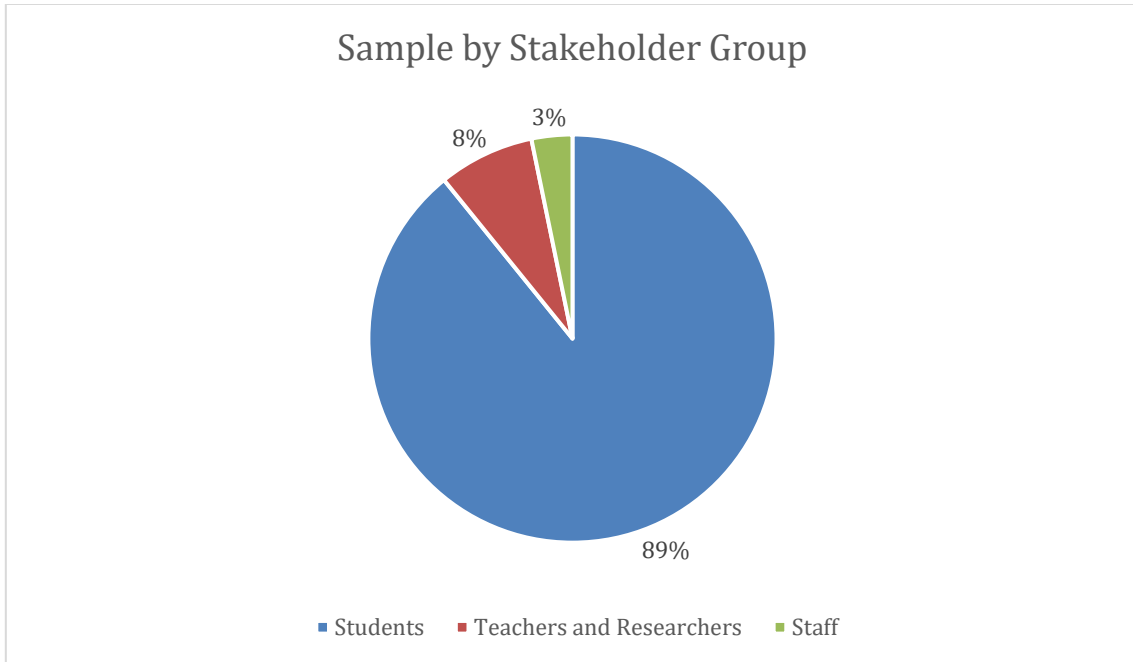
As mentioned above, this research work relied on a survey administered to three University stakeholders' groups (students, teachers and researchers, and staff) to assess their awareness of the SDGs and their perceptions towards the sustainability practices implemented on campus.

### 2.1 Overview of the survey sample

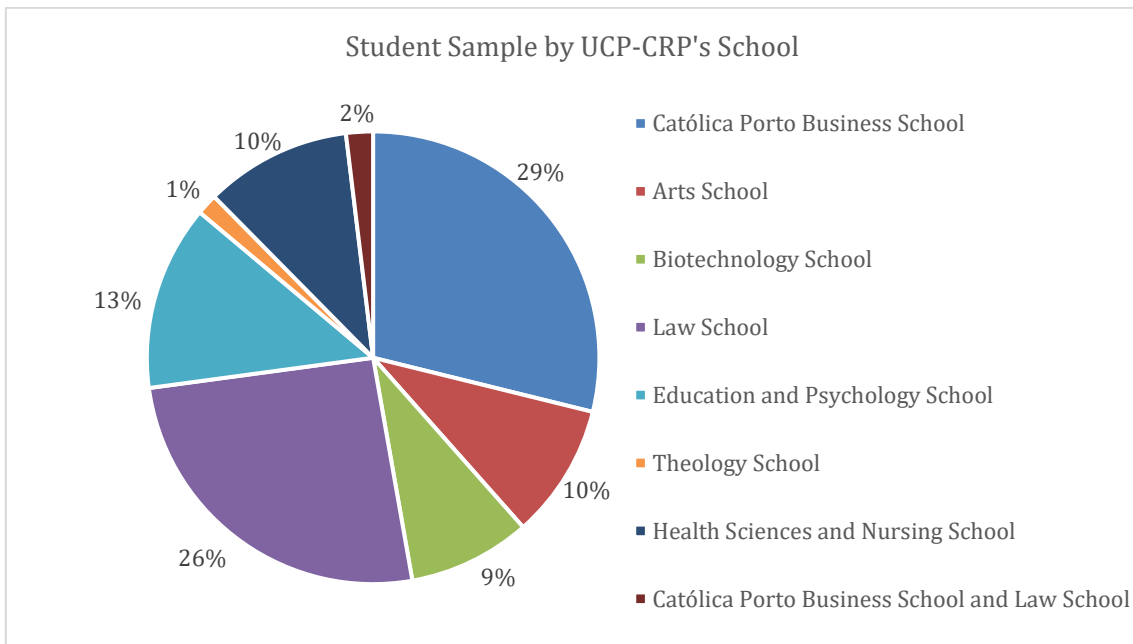
The survey gathered responses from 526 participants from the three main stakeholder groups at the UCP-CRP: students (89%), teachers and researchers (8%) and staff (3%). Equally based on the total number of participants, most of the respondents were female (73%) and 18-24 years old (69%). Additionally,

most of the student participants are from the Católica Porto Business School (29%), from the School of Law (26%), and from bachelors (55%) and masters (35%) degrees.

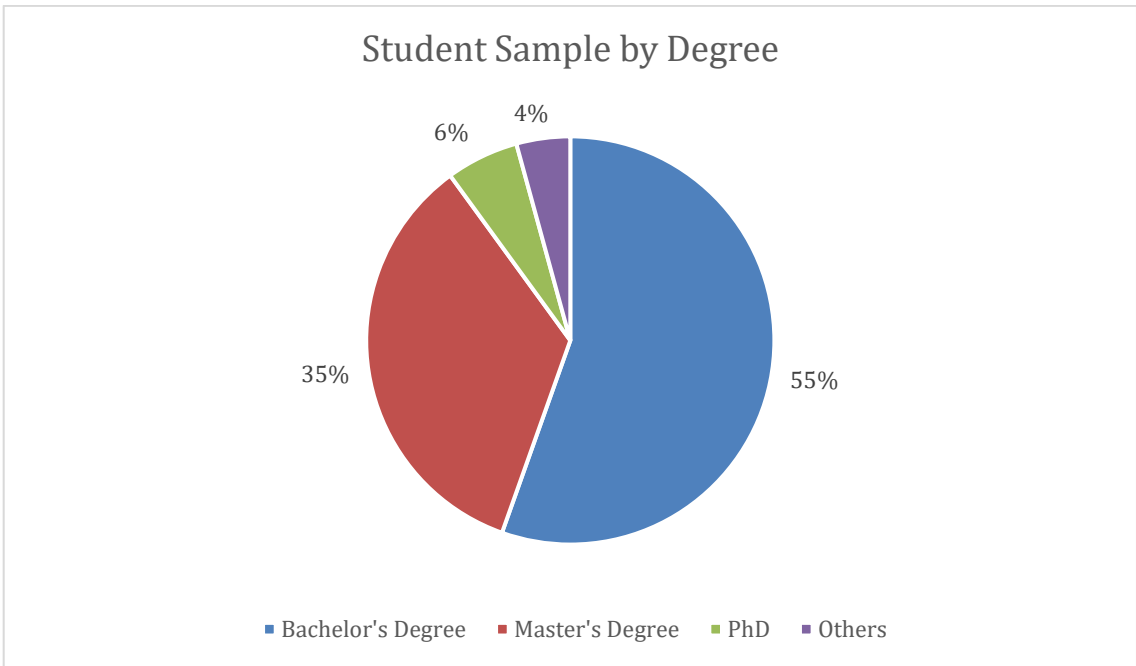
This distribution reflects the greater accessibility of student contacts and their higher representation on campus.



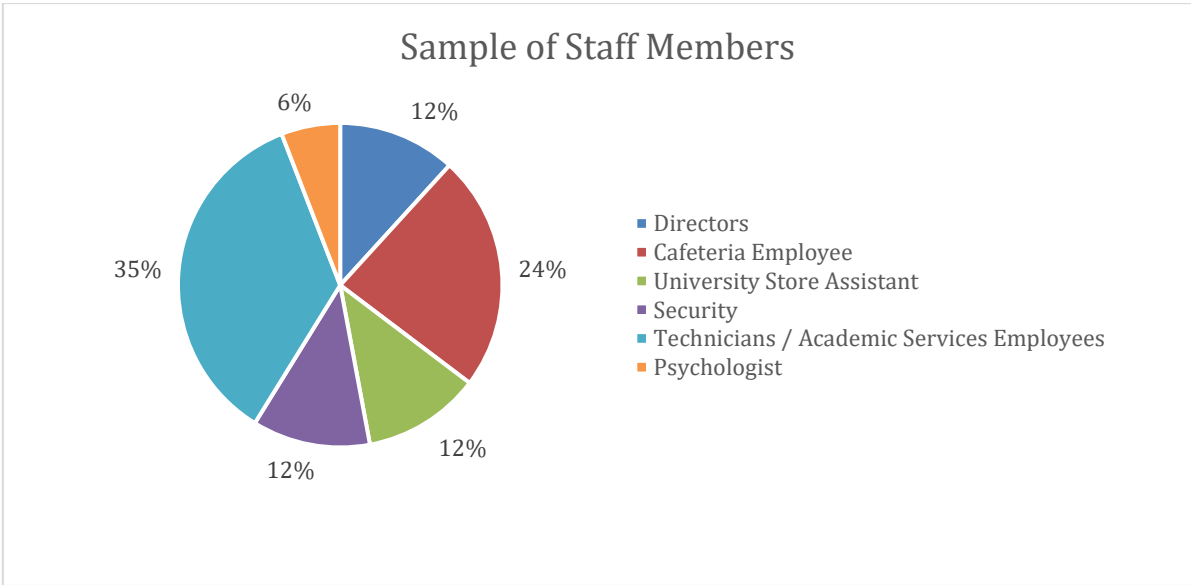
**Graphic 1:** Sample by Stakeholder Group



**Graphic 2:** Student sample by UCP-CRP School



**Graphic 3:** Student Sample by Degree



**Graphic 4:** Sample of staff members

## 2.2 Awareness towards the Sustainable Development Goals (SDGs)

According to the surveys' results, 23% of participants were not familiar with the SDGs.

Of the stakeholders surveyed, 25% of students and 29% of staff reported being unaware of the SDGs, with only one teacher being unfamiliar with the concept. Notably, only one student from the School of Biotechnology was unfamiliar with the SDGs, suggesting that students enrolled in natural science-related curriculum programs are more likely to be exposed to sustainability topics and, consequently, have a stronger understanding of SD (Duarte et al., 2023). The Católica Porto Business School and the School of Psychology and Education also revealed a high level of awareness of the SDGs, with only 16% and 19% of their participating students claiming to be unaware of them, respectively, compared to an average of 35% of unaware students surveyed in other schools.

Participants were asked if they had read, heard, or seen any information about the SDGs through the University's digital communication channels – 49% answered “No”. Additionally, among those who reported never encountering SDG-related content through these channels, 42% were unfamiliar with the SDGs.

To account for other communication channels beyond digital media, participants were additionally questioned if they had noticed any SDG-related awareness tools on campus or through other communication channels – 63% of respondents answered “No”. Among these, 33% were unaware of the concept of SDGs.

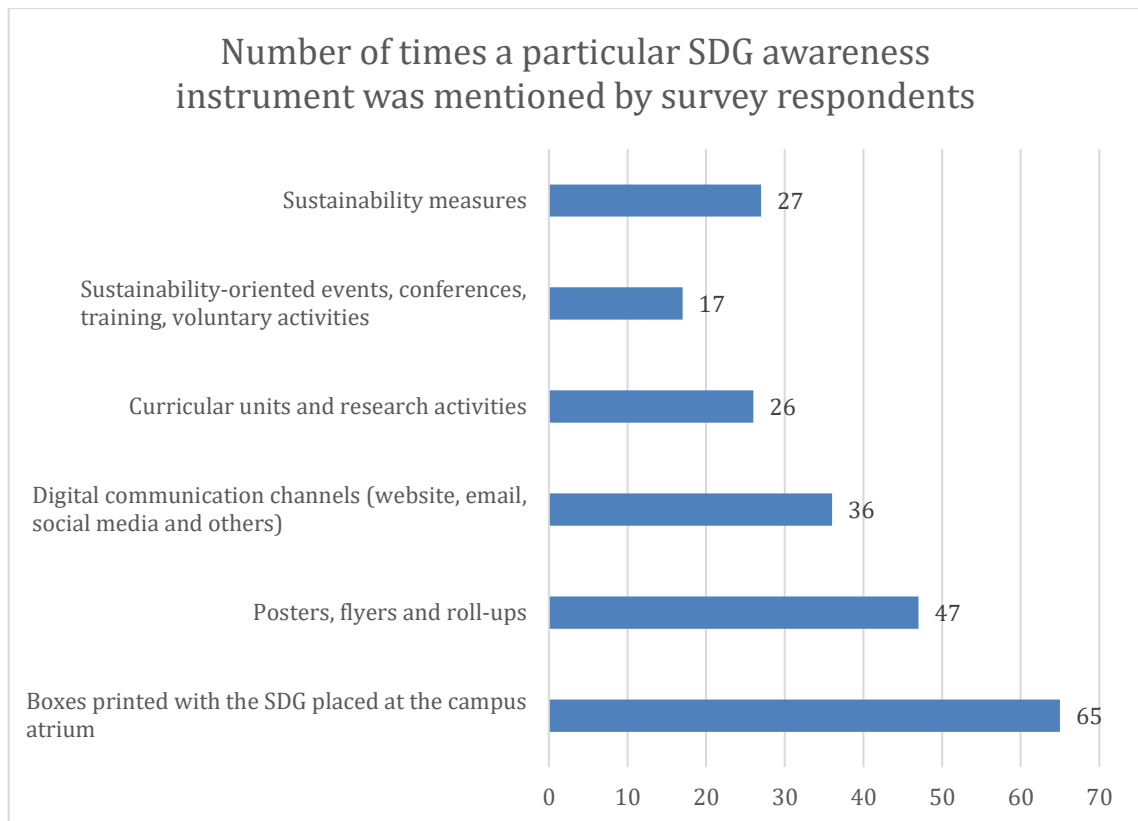
The lack of awareness of the UCP-CRP's SDG communication efforts is concerning, as effective communication is critical to fostering the stakeholder engagement necessary for the sustainable transformation of the University

(Abakumov & Beresten, 2023). Furthermore, sharing information through digital media can create opportunities for community members to provide feedback on the University's environmental performance (Araújo et al., 2023). Therefore, it is essential for the University to strengthen the effectiveness of its sustainability communications.

Among stakeholder groups, surveyed teachers and researchers were the most likely to report noticing SDG awareness instruments, with 88% identifying them in the University's digital channels and 73% in campus infrastructures. Furthermore, members of the academic community enrolled in PhD programs were the most likely to recognize these communication channels.

As expected, respondent students from the School of Biotechnology report the highest level of awareness of SDG-related communication efforts, as students enrolled in natural science-related degrees are more likely to be engaged in sustainability (Duarte et al., 2023). This higher level of awareness may also be explained by the type of information shared on their digital platforms (76%), and the visibility of SDG-related displays in their school building (51%).

Among participants who reported encountering SDG awareness instruments through at least one of the communication channels (58%), only 54% (164 respondents) were able to accurately identify them in an open-ended question where they were able to write more than one measure. Graphic 5 illustrates the frequency with which specific awareness measures were mentioned.



**Graphic 5:** Number of times a particular SDG awareness instrument was mentioned by survey respondents

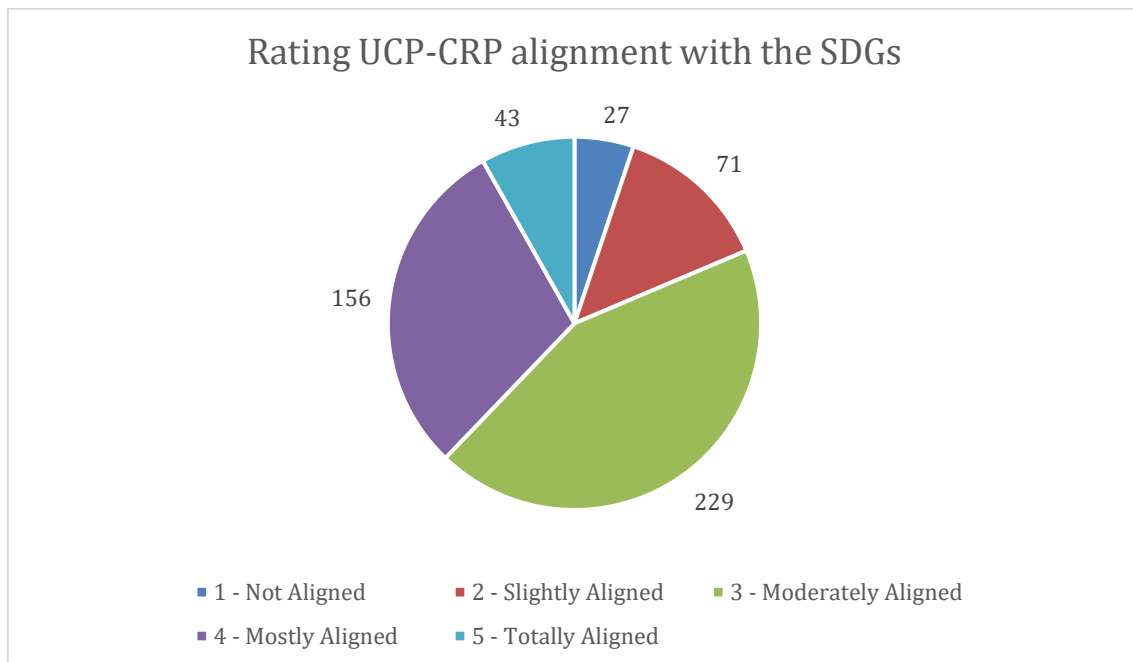
Notably, 27 responses referenced existing sustainability initiatives – such as recycling programs, tree-planting events, the availability of water dispensers on campus, the use of photovoltaic panels, and water efficiency measures – as SDG awareness efforts.

Awareness levels of these instruments varied significantly across stakeholder groups. While 70% of the teachers and researchers surveyed were able to identify SDG awareness instruments, only 29% of students and 53% of staff participants were able to do so. There were also differences between schools. Students surveyed from the Schools of Arts, Law, and Health Sciences and Nursing had the lowest identification rates (18%, 23% and 12%, respectively). On the other hand, student participants from the School of Theology (71%) presented the highest level of awareness, followed by those from the Schools of Biotechnology

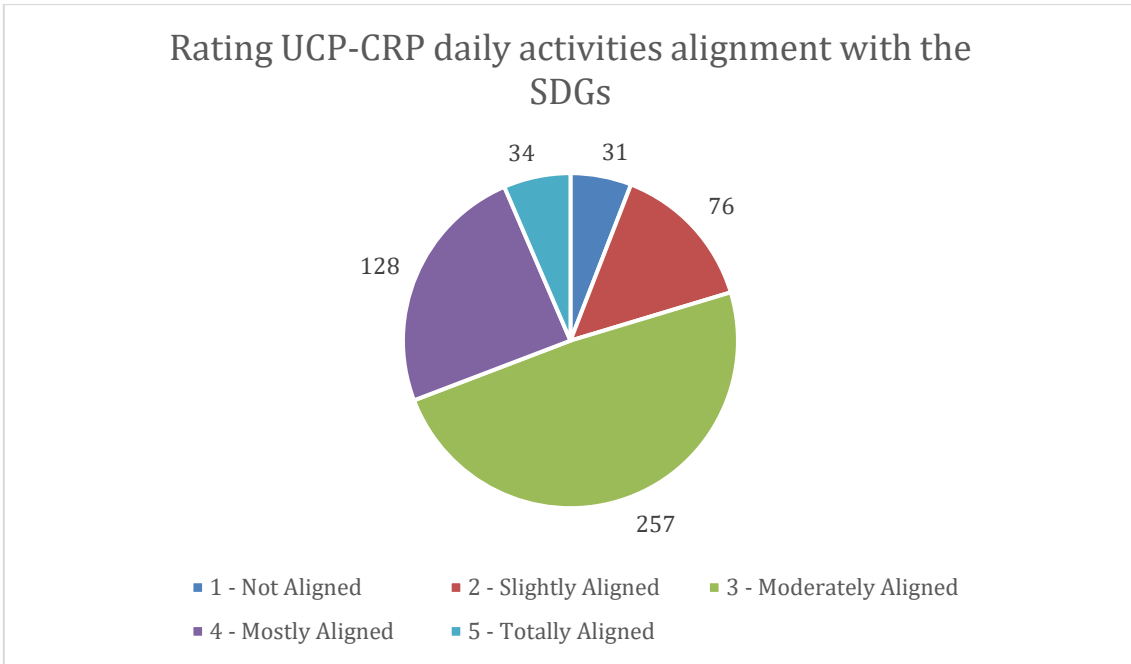
(49%), the School of Education and Psychology (39%) and the Católica Porto Business School (30%).

The survey also assessed perceptions of the University's commitment to the SDGs and the alignment of its daily activities with these goals. Respondents were asked to rate the following statements on a scale of 1 to 5: "How much is UCP-CRP committed to the SDGs?" (Graphic 6) and "How much are UCR-CRP daily activities aligned with the SDGs?" (Graphic 7). The average scores were 3,22 and 3,11 respectively.

When the responses were analyzed by demographic and organizational sample characteristics no significant differences were found. Nevertheless, 90% of the respondents rated the University's commitment higher than the alignment of its daily activities with the SDGs, suggesting that University stakeholders recognize that simply incorporating SDG-related discourse into institutional communications is insufficient to create a truly sustainable campus (Cuesta-Claros et al., 2023).

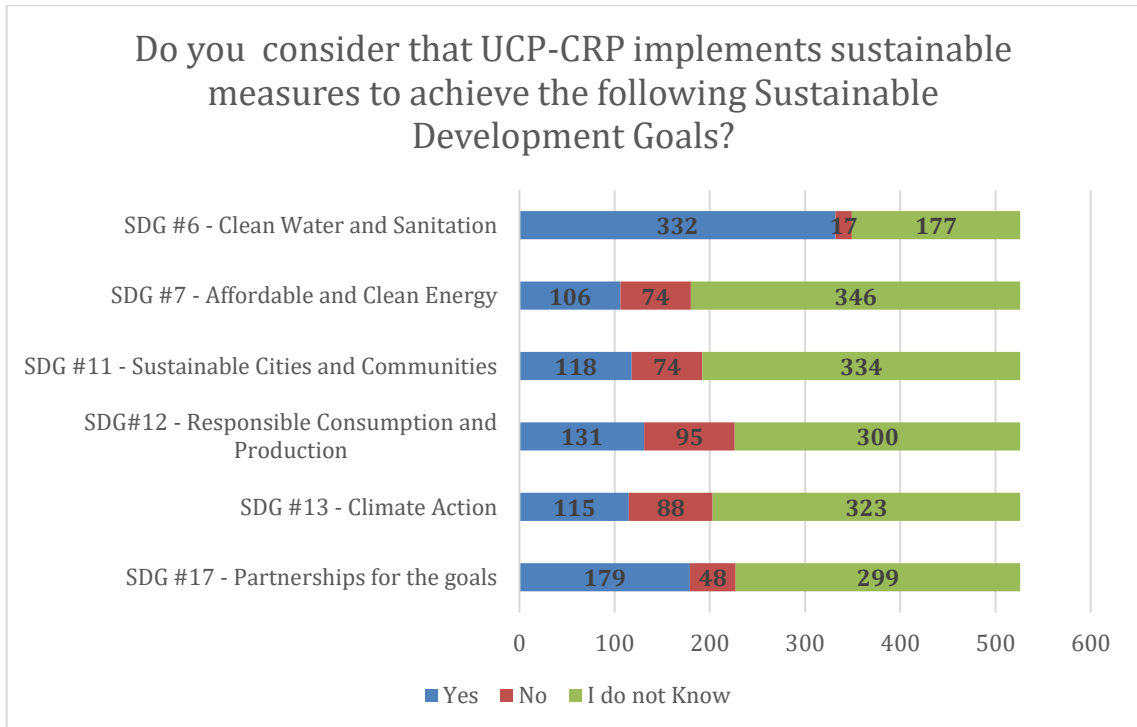


**Graphic 6:** Rating UCP-CRP alignment with the SDGs



**Graphic 7:** Rating UCP-CRP's daily activities alignment with the SDGs

Participants were also asked whether they believed the University had implemented sustainable actions to address each SDG related to environmental sustainability (see results on Graphic 8).



**Graphic 8:** Participants' perception towards UCP-CRP alignment with each environmental SDG

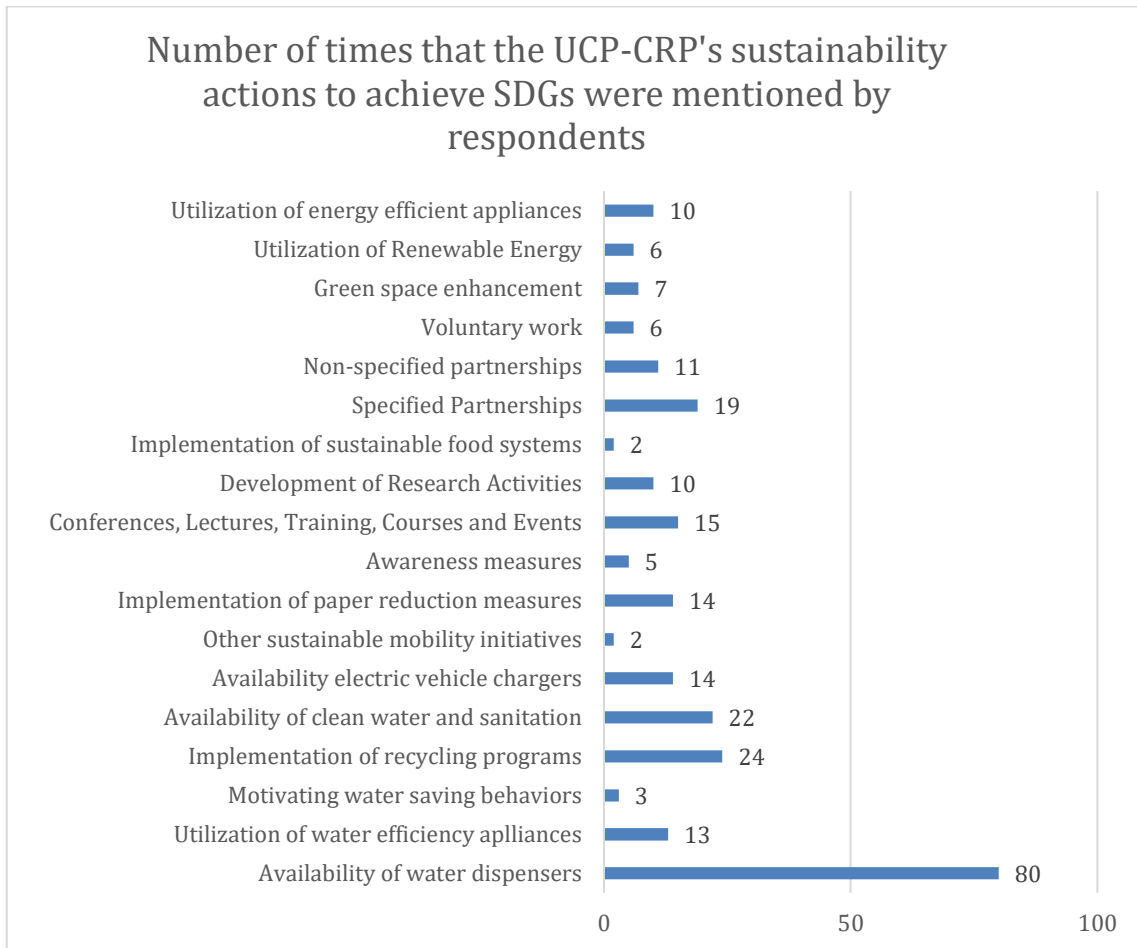
The graphic shows that sustainability measures implemented by the University for SDG #6 – Clean Water and Sanitation are the most widely recognized, with 63% of respondents acknowledging efforts in this area.

While few stakeholders explicitly stated that the University does not implement sustainability measures for these SDGs, a considerable number of responses indicate a lack of awareness regarding their potential implementation. Significantly, there is a considerable gap between the number of “No” and “I Do Not Know” responses and affirmative answers, highlighting the low level of awareness of these measures. This underscores the need for greater visibility and communication of the University’s sustainability initiatives.

When analyzing responses by School, student participants from the School of Biotechnology were the most likely to recognize sustainability initiatives, representing the largest percentage of surveyed students who responded affirmatively to questions related to the SDGs 6, 11, 12, 13, and 17.

Participants were also asked to identify specific sustainability measures the University implements in line with the SDGs, in an open question where they

could identify more than one measure. Graphic 9 summarizes the measures identified and the number of times they were mentioned.



**Graphic 9:** Number of times that the UCP-CRP's sustainability actions to achieve SDGs were mentioned by respondents

Only 147 participants were able to identify sustainability initiatives related to the SDGs. Among stakeholder groups, teachers and researchers (55%) and staff (53%) were more likely to identify these initiatives than students (26%). Additionally, students from the School of Biotechnology (44%), followed by the School of Education and Psychology (37%), were more likely to recognize these initiatives than students from other schools, where the average identification rate was 24%. It is worth noting that the Católica Porto Business School presented a lower recognition rate than the average (21%).

As expected, the most frequently mentioned sustainability measures are related to water and sanitation, since the academic community perceives the University's strongest efforts in SDG #6 – Clean Water and Sanitation compared to other goals. In addition to mentioning the availability of clean water and sanitation, participants most often mentioned the use of sensor-based systems and timers to regulate water consumption.

By analyzing participants' responses, it becomes clear that while they have a general understanding of the University's sustainability efforts, they often struggle to mention specific practices. For instance, partnerships in the context of sustainability were mentioned 30 times, but only 19 responses specified the entities involved or the purpose of these collaborations. Among the entities identified were Lipor, Galp and Águas do Porto. In terms of the purpose for establishing these partnerships, most answers were related to special curricular unit classes, INSURE.hub events and research activities.

Regarding recycling and paper reduction, participants cited measures such as replacing paper and plastic utensils with glass alternatives at events, promoting digital tools instead of paper-based learning materials and installing hand dryers in bathrooms. Additionally, recycling practices in labs and art studios were mentioned as contributing to sustainability efforts.

In addition to mentioning the availability of electric car chargers at the University, respondents highlighted the availability of two bus stations near the University and designated bicycle parking spaces.

For research-related sustainability efforts, only one specific example was given: a textile research project developed by the School of Biotechnology.

Regarding energy efficiency measures, participants referred to awareness campaigns, sensor-based lighting systems and LED installations.

This limited awareness of the SDGs, their communication channels, and the initiatives required for their implementation is alarming. To increase the

effectiveness of sustainable transitions, HEIs must actively engage the academic community in adhering to the SDG guidelines (Xiong & Mok, 2020).

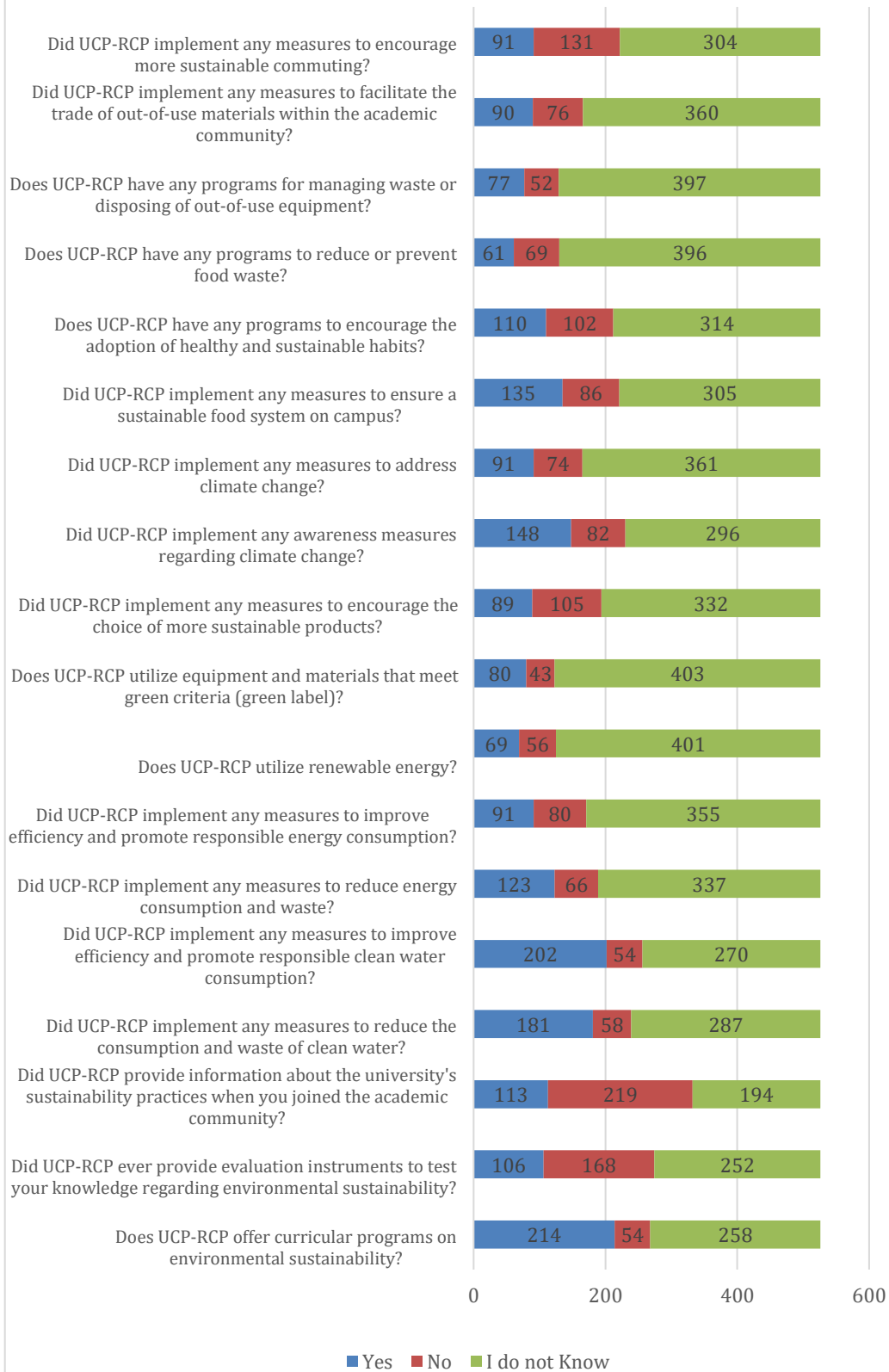
### 2.3 Awareness towards specific sustainability measures implemented by UCP-CRP

The survey also explored stakeholders' perceptions of specific sustainability actions taken by the University. Participants were asked whether they believed the University had adopted certain sustainability initiatives, with the response options of "Yes", "No" or "I do not know". The summarized results are presented in Graphic 10.

Analyzing the responses regarding stakeholder awareness of UCP-CRP's green practices, it becomes evident that there is a significant lack of recognition of these initiatives, especially those related to renewable energy, procurement and waste, and food systems, whose effectiveness depends on the behaviors and engagement of the academic community (Araújo et al., 2023).

When these responses are analyzed based on the sample's characteristics, several trends emerge. Teachers and researchers were more likely to recognize the sustainability measure in question. Similarly, students from the Schools of Biotechnology and Theology, as well as those enrolled in PhD and bachelor's programs, were more likely to acknowledge these initiatives.

## Stakeholders' awareness towards UCP-CRP specific green initiatives



**Graphic 10:** Stakeholders' awareness towards UCP-CRP specific green initiatives

Finally, respondents who answered “Yes” to any of the previous questions were asked to specify which measures they recognized. In total, 127 responses were collected. The surveyed students from the schools of Biotechnology (34%), Theology (34%), Education and Psychology (33%), and Arts (29%) were the most likely to identify sustainability initiatives. It is worth noting that the students surveyed from the Católica Porto Business school only achieved an identification rate of 13%.

Although the School of Arts previously demonstrated low awareness of sustainability initiatives, the higher participation of its students in this question is justified by responses related to sustainable measures implemented in the school cafeteria and the specific recycling procedures required in art studios.

Additionally, teachers and researchers and staff were significantly more likely to provide detailed responses than students (58% and 59% vs. 21%).

Table 3 presents the collected responses, organized by the addressed questions and the number of times each measure was mentioned.

The findings highlight participants’ difficulty in identifying measures related to sustainable procurement and food systems and the lack of orientation on sustainable measures for new members of the university, missing a crucial and timely opportunity to disseminate information on these important issues.

Nevertheless, practices related to energy and water use, transportation, waste management and sustainability education and awareness were widely recognized.

Question administered towards specific sustainability measures	Specified sustainability measures recognized by university stakeholders	Frequency of sustainability measures mentioned
Does UCP-CRP offer curricular programs on environmental sustainability?	Availability of SDGs Curricular Units	11
	Other sustainability-focused curricular units and curricular unit contents	20
	Sustainability-focused degrees	6
Did UCP-CRP ever provide evaluation instruments to test your knowledge regarding environmental sustainability?	Evaluation processes within the sustainability curricular units	1
Did UCP-CRP provide information about the University's sustainability practices when you joined the academic community?		
Did UCP-CRP implement any measures to reduce the consumption and waste of clean water?	Application of timers on taps	8
	Application of flow reducers on taps	1
	Application of motion sensors on taps	3
	Application of sustainable appliances on taps (unspecified)	8
	Automatic flush toilet	4

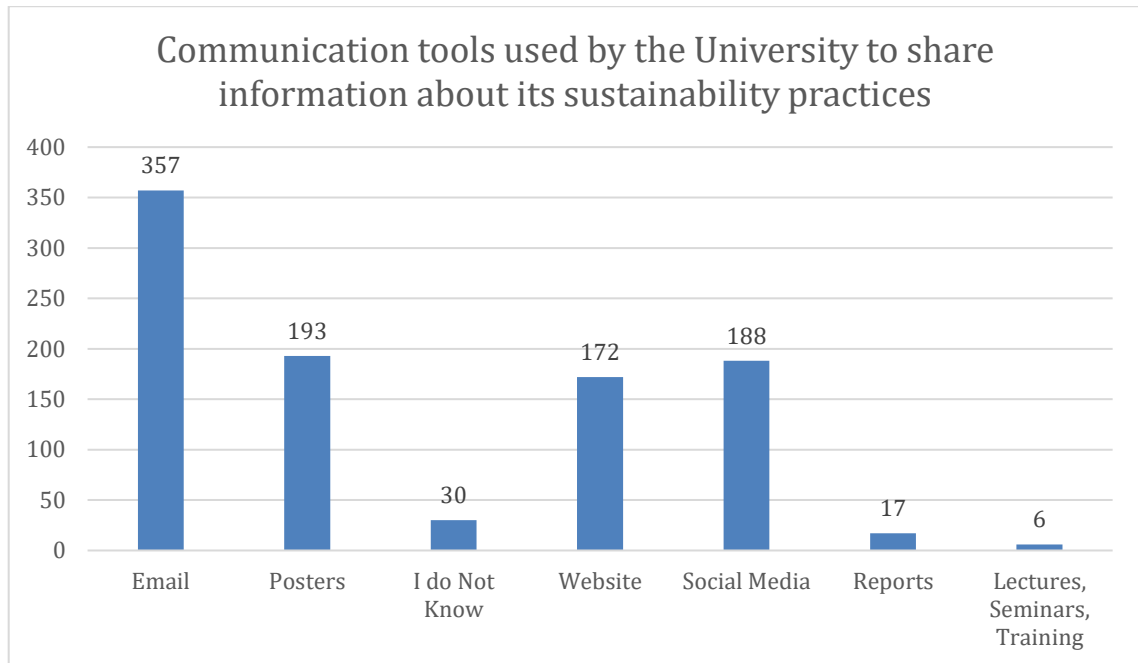
Did UCP-CRP implement any measures to improve efficiency and promote responsible clean water consumption?	Displaying posters near bathroom sinks and other sinks to raise awareness of responsible water use	12
Did UCP-CRP implement any measures to reduce energy consumption and waste?	Integration of motion sensors on campus lights	5
	Implementation of timers on campus lights	2
	Implementation of energy appliances on campus lights (unspecified)	4
	Implementation of LED lamps	2
	Implementation of a centralized system to turn off building's lights at the end of the day	3
Did UCP-CRP implement any measures to improve efficiency and promote responsible energy consumption?	Procedures to encourage switching off equipment when not in use (unspecified)	2
	Security staff are responsible for ensuring that all equipment and devices are turned off	1
	Displaying posters and sending emails to remember to turn off lights and equipment when not in use	3
Does UCP-CRP use renewable energy?	Utilization of PV energy systems	7
Does UCP-CRP use equipment and materials that meet green criteria (green label)?		
Did UCP-CRP implement any measures to encourage the choice of more sustainable products?		

Did UCP-CRP implement any awareness measures regarding climate change?	Sustainability training sessions, conferences, workshops, research projects, voluntary and solidarity activities	22
	Sending emails and website publications related to sustainability issues and their solutions	4
	Placement of posters and card boxes in the campus infrastructures	2
	Awareness measures (unspecified)	1
Did UCP-CRP implement any measures to address climate change?		
Did UCP-CRP implement any measures to ensure a sustainable food system on campus?	Use of biodegradable and reusable utensils and glass in the cafeteria	2
Does UCP-CRP have any programs to encourage the adoption of healthy and sustainable habits?	Provision of healthy and sustainable food choices	4
	Provision of diverse food choices	3
	Provision of a vegetarian menu option at the university cafeterias	4
Does UCP-CRP have any programs to reduce or prevent food waste?		
Does UCP-CRP have any programs for managing waste or disposing of out-of-use equipment?	Implementation of water dispensers to avoid the purchase of plastic water bottles	30
	Availability of a recycling system	15
	Implementation of recycling procedures for chemicals, contaminants and sharps in the Conservation and Restoration Centre and in the laboratories	4

	Digitalization of learning processes	2
	Replacement of plastic and paper utensils on events for reusable ones	1
	Handing out informational materials to promote reduced printing	2
	Placement of hand-dryers on bathrooms to avoid paper waste	2
Did UCP-CRP implement any measures to facilitate the trade of out-of-use materials within the academic community?	Reuse of materials between departments	1
	Donation of unused materials for other institutions	4
Did UCP-CRP implement any measures to encourage more sustainable commuting?	Availability of a charger station for electric cars	13
	Availability of infrastructure to park bicycles	5
	First-year students receive a guide with a map detailing routes to the university, including all public transport options.	2
	Existence of a parking fee near campus	1
	Provide financial support for Erasmus students who choose not to travel by airplane	1

**Table 3:** Specified sustainability measures recognized by University stakeholders

Participants were also presented with a multiple-choice question asking them to identify the communication the University uses to share information about its sustainability practices. The following graphic summarizes their responses.



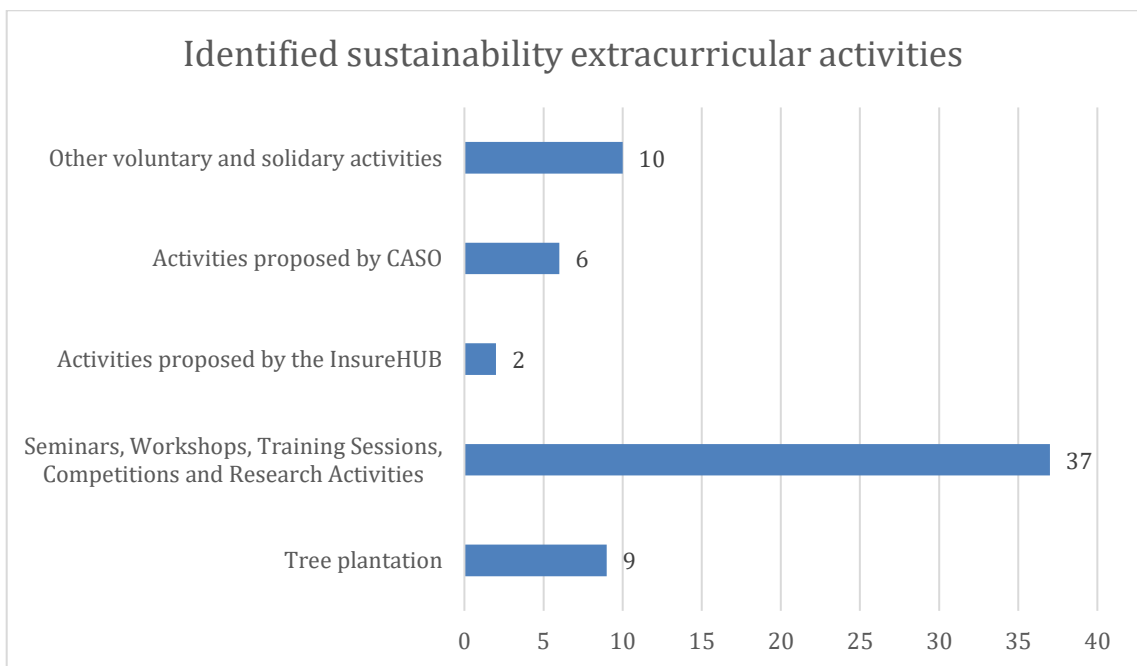
**Graphic 11:** Communication tools used by the University to share information about its sustainability practices

It is evident that digital communication channels are the most widely recognized. However, their effectiveness remains questionable as participants struggled to identify specific sustainability measures despite acknowledging these channels. This further reinforces that merely aligning HEIs communications with sustainability on a discursive level is insufficient to achieve a truly sustainable campus (Cuesta-Claros et al., 2023). Moreover, as previously mentioned, utilizing digital media, can enhance awareness and invite community feedback on the University’s environmental performance (Araújo et al., 2023). Strengthening sustainability communications is, therefore, essential.

Participants were also questioned whether UCP-CRP offered extracurricular activities focused on environmental sustainability. Only 30% responded “Yes”, indicating a low level of awareness of these initiatives. Among stakeholder

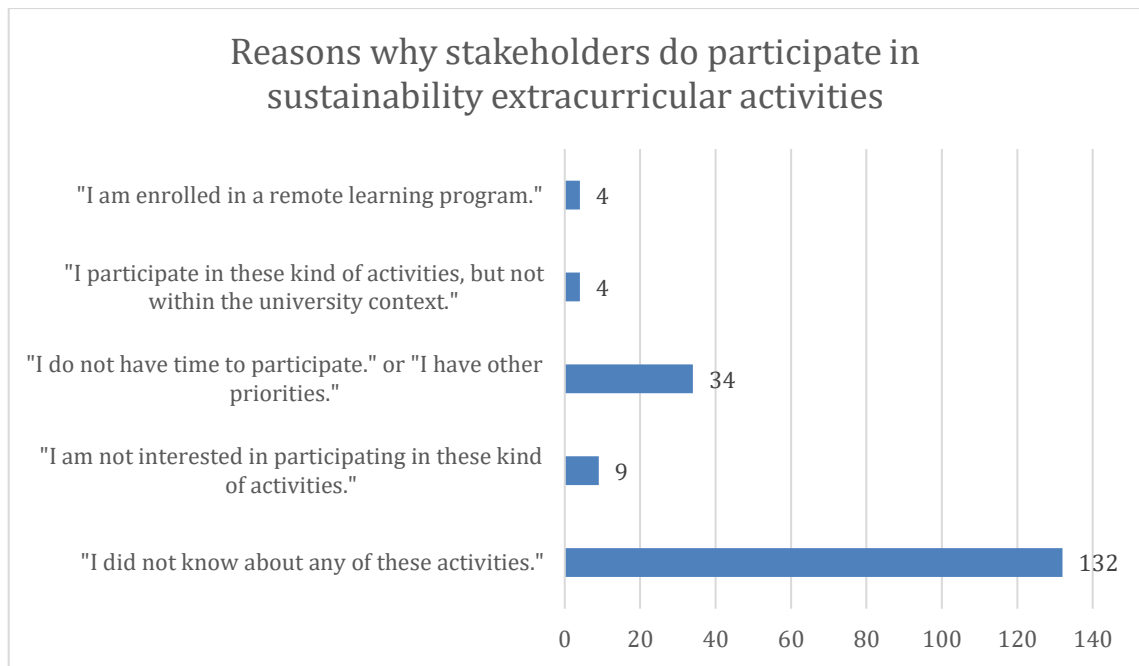
groups, students demonstrated the lowest awareness, with only 27% recognizing such activities. This trend was even more pronounced among students surveyed from the School of Arts and the School of Law, where only 16% and 17%, respectively, acknowledged the existence of these initiatives.

When asked to identify specific extracurricular activities, only 61 participants (12%) were able to provide a clear answer. The following graphic summarizes the activities identified.



**Graphic 12:** Identified sustainability extracurricular activities

Only 51 respondents (10%) reported participating in at least one of these activities, and student participation was even lower at only 8%. Only the schools of Theology and Education and Psychology exceeded a participation rate of 15%. When asked why they had not participated, 180 respondents provided justifications, identifying five main reasons summarized in Graphic 13, the most common being a lack of awareness that these activities were taking place.



**Graphic 13:** Reasons why stakeholders do not participate in sustainability extracurricular activities

In the last part of the survey, the different stakeholders groups were asked specific questions related to their daily activities and how they relate or intersect with sustainability.

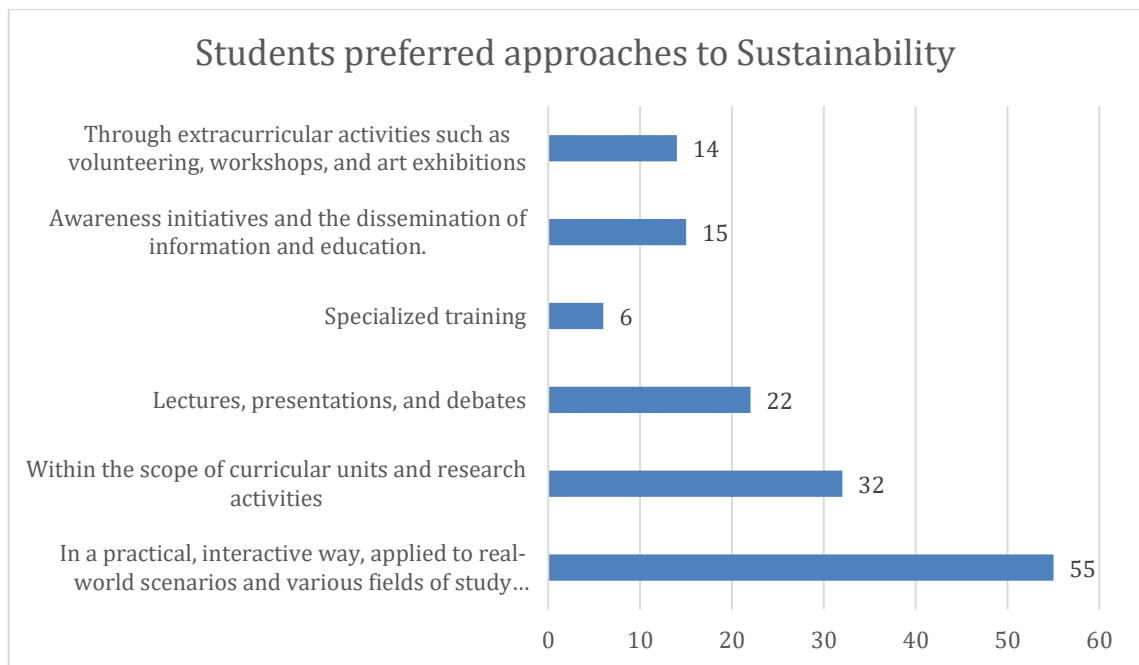
### 2.3.1 Students' Perspectives

Students were asked whether their curriculum programs included curricular units focused on environmental sustainability. Only 107 students (23%) responded "Yes". Notably, the Católica Porto Business School and the School of Biotechnology had the highest proportion of respondents confirming the existence of such courses.

When asked if any of their curricular units addressed sustainability topics, 36% said "Yes". Again, Católica Porto Business School and the School of Biotechnology stood out, with their students reporting a higher recognition of

sustainability-related content (54% and 60%, respectively) compared to the average of 21% for the other schools.

Regarding their interest in having environmental sustainability integrated into their academic education, 289 students (61%) expressed interest. When asked how they would like to receive this information, the majority preferred practical and interactive learning experiences that connect sustainability to real-world applications and field studies. Graphic 14 summarizes their preferred mentioned approaches.



**Graphic 14:** Students preferred approaches to sustainability

Interestingly, students also revealed interest in formal academic education towards sustainability, which is crucial to delivering technical sustainability competences (Duarte et al., 2023).

Students were also asked, on a scale from 1 to 5, whether they believed the University was investing in sustainability-related research. The average score was 3, with Schools of Biotechnology, and Theology, and Católica Porto Business School perceiving a stronger research focus on sustainability, with Biotechnology

leading with an average score of 3.65. Notably, students' perceptions varied by degree level: bachelor's students with a 2.94 score, master's students with a 3.03 score and PhD students with 3.40.

Awareness of student organizations focused on sustainability was also low. Only 35 students were aware of such organizations, and when asked to identify them in an open-ended question, only 10 students responded, all of whom named the CASO organization – the volunteer organization of UCP-CRP, dedicated to promoting solidarity and structuring volunteer efforts.

This lack of awareness of co-curricular activities and sustainability-oriented organizations represents a missed opportunity for the university, as youth entrepreneurship and related initiatives serve as powerful tools to enhance student engagement in sustainability (Omotosho et al., 2023).

### 2.3.2 Teachers and Researchers' Perspectives

Among the 40 teachers and researchers surveyed, 5 did not engage in teaching activities and only 3 reported teaching curricular units focused on sustainability. However, when asked if they addressed sustainability topics in their classes, 21 out of the 35 teachers and researchers engaged in teaching activities (60%) said "Yes".

Of the 14 teachers and researchers who did not include sustainability topics, 6 stated that sustainability was not relevant to their subject matter, while 1 cited a lack of time to cover additional topics.

When asked how sustainability should be integrated into teaching, teachers and researchers also favored interactive approaches, in line with student preferences and other universities that promote teaching of sustainability through pedagogical practices such as transdisciplinary studies and experimental practices (Duarte et al., 2023).

Regarding institutional support, only 10 out of 35 active teachers and researchers felt that the university did not encourage the integration of sustainability topics into their courses. However, when asked whether the university actively promotes training in sustainability topics, only 9 teachers and researchers said “Yes”. These results may be concerning since many universities are falling behind in the transition to a more sustainable campus, mostly because their teachers and researchers do not incorporate sustainability in their teaching activities due to a lack of necessary guidance on how to do so and how to implement sustainable initiatives on campus (Leal Filho, Shiel, et al., 2019).

Teachers and researchers were also asked to rate, on a scale from 1 to 5, the university’s encouragement of sustainability research. The average score was 3.28, which is closely aligned with the perceptions of students (3.00).

### 2.3.3 Staff’ Perspectives

Of the 17 staff members surveyed, only 2 indicated that the university supported their training in sustainability-related topics. Addressing this issue by treating the campus as a living laboratory could significantly enhance sustainability training and promote long-term sustainable behaviors (Amaral et al., 2020).

# Chapter 4

## Conclusions

### 1. Environmentally sustainable practices at UCP-CRP

This study addressed the environmental sustainability efforts of UCP-CRP, evaluating its alignment with the best sustainability practices recognized in literature. Through the analysis of different documents, interviews with university leaders and a survey of the academic community, this research provides a comprehensive overview of UCP-CRP's sustainability initiatives and analyses the perceptions of the university's key stakeholders towards them.

The main findings (summarized on table 7 on appendix D) indicate that UCP-CRP has made significant progress towards building a sustainable campus, implementing measures across all the relevant impact areas (academics, engagement, operations and planning).

The university offers multiple sustainability-focused curricular programs and research opportunities, actively promoting sustainability in education. Additionally, efforts in energy and water efficiency and waste management demonstrate the higher education institution commitment to reduce its environmental impact.

However, the study highlights critical areas for improvement, particularly the limited awareness among the academic community regarding the SDGs and the sustainable practices implemented by the university, which undermine their effectiveness. Therefore, it is essential to strengthen communication strategies and incorporate the SDGs more explicitly into institutional discourse. Additionally, integrating sustainability into academic curricula can significantly raise the students' awareness, as it not only offers them technical sustainability knowledge but also aligns with their demonstrated interest in this educational approach.

Furthermore, although UCP-CRP already took considerable steps in sustainable operations, further action is needed regarding sustainable food and transportation. Expanding sustainable food options, reinforcing and implementing new food waste management systems, promoting a healthy and informed culture regarding food systems, improving comfort in commuting, diversifying means of transportation and fostering a sustainable commuting culture would strongly contribute to achieving a sustainable campus.

Currently, the university lacks a centralized sustainability framework, evident in the absence of a sustainability report, a sustainability coordinating committee, and limited engagement from the academic community in sustainability governance. Addressing these gaps and strengthening the role of the SDGs as a powerful guidance tool would provide a more cohesive sustainability transition. Additionally, a sustainable investment strategy would be crucial for the successful implementation of these initiatives, ensuring that financial resources align with the university's long-term commitments.

## 2. Limitations and Recommendations

Since this research methodology relies on published documents, interviews, and surveys, it presents certain methodological limitations that may influence the conclusions drawn. These limitations include a restricted sample size, a time gap between data collection and presentation, limited access to sustainability-oriented reports, and potential inaccuracies in responses due to recall difficulties in interviews and surveys (Yin, 2014).

Moreover, this study focuses solely on the environmental dimension of sustainability, while the social and governance aspects should also be considered in future research. Additionally, financial viability was not assessed, despite its potential importance in persuading decision-makers to invest in sustainable programs (Mohammadalizadehkorde & Weaver, 2020). An operational viability analysis should also be conducted considering the university's specific context and campus characteristics to assess the feasibility of the proposed measures.

Finally, this research does not consider public legislation or recommendations, which could serve as a valuable starting point in guiding a sustainable transition on campus.



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# Appendix

## Appendix A: University Green Rankings Indicators

Category	Indicators
Setting and Infrastructure	Ratio of open space area towards total area; total area on campus covered in forest vegetation; total open space area divided by total campus population; total area on campus covered in planted vegetation; conservation: plant, animal and wildlife, genetic resources for food and agriculture secured in medium or long-term conservation facilities; total area on campus for water absorption besides forest and planted vegetation; percentage of university budget for sustainability efforts.
Energy and Climate Change	Energy efficient appliances usage; total electricity usage divided by total campus population; smart building implementation; elements of green building implementation reflected in all construction and renovation policies; number of renewable energy sources in campus; ratio of renewable energy production divided by total energy usage per year; greenhouse gas emission reductions program; total carbon footprint divided by total campus' population; impactful university programs on climate change.
Waste	Recycling program for university's waste; organic waste treatment; program to reduce the use of paper and plastic in campus; inorganic waste treatment; toxic waste handled; sewerage disposal.
Water	Water conservation program implementation; water recycling program implementation; water efficient appliances usage; consumption of treated water.

<b>Transportation</b>	Zero Emissions Vehicles (ZEV) policy on campus; the total number of ZEV divided by total campus population; the total number of vehicles (cars and motorcycles) divided by total campus' population; shuttle service; number of initiatives to decrease private vehicles on campus; ratio of ground parking area to total campus' area; program to limit or decrease the parking area on campus for the last 3 years.
<b>Education &amp; Research</b>	Number of student organizations related to sustainability; number of sustainability community services projects organized and/or involving students; the ratio of sustainability research funding towards total research funding; number of sustainability-related startups; number of events related to sustainability; number of scholarly publications on sustainability; university-run sustainability website; sustainability report; the ratio of sustainability courses towards total courses/subjects

**Table 4:** Summary of UI Green Metric World Rankings Indicators ((Methodology - UI GreenMetric, *n.d.*)

Category	Impact Area	Credit	Indicator
<b>Academics</b>	<u>Curriculum</u>	Sustainability Course Offerings	Percentage of academic departments with sustainability course offerings
			Published sustainability course listings
			Support for academic staff to integrate sustainability into the curriculum
		Undergraduate Programs	Institutional sustainability learning outcomes for undergraduate students
			Undergraduate programs with sustainability-focused learning requirements
			Percentage of undergraduate qualifications awarded that have sustainability-focused learning requirements
		Graduate Programs	Graduate programs with sustainability-focused learning requirements
			Percentage of graduate qualifications awarded that have sustainability-focused learning requirements

		Applied Learning	Applied learning for sustainability program
		Sustainability Literacy	Sustainability literacy assessment design and administration
			Percentage of students assessed for sustainability literacy
	<u>Research</u>	Sustainability Research	Percentage of academic departments engaged in sustainability research
			Incentives for sustainability research
		Sustainability Research Center	Organized sustainability research center, institute, or unit
		Responsible Research and Innovation	Published ethical code of conduct for research
			Recognition of integrated, community-based, and extra-academic research
			Inter-campus collaboration for responsible research and innovation
			Inter-campus collaboration for responsible research and innovation
<b>Engagement</b>	<u>Campus Engagement</u>	Outreach and Communication	Sustainability outreach and communications
			Percentage of campus stakeholders reached through sustainability outreach and communications
		Co-curricular Activities	Student sustainability organization
			Sustainability-focused co-curricular activities
			Percentage of students that participate in sustainability activities
		Staff Engagement and Training	Staff sustainability network or engagement program
			Sustainability-focused training for employees
			Percentage of employees that participate in sustainability activities
			Sustainability culture assessment design and administration
			Percentage of students assessed for sustainability culture

	<u>Public Engagement</u>	Sustainability Culture Assessment	Percentage of employees assessed for sustainability culture
		Civic Engagement	Percentage of students that participate in civic engagement programs
			Employee community service program
			Support for public policies to advance sustainability
		Community Partnerships	Sustainability-focused community partnerships
			Partnerships to support underrepresented groups and vulnerable populations
			Community partnership assessment
		Continuing Education	Continuing education offerings in sustainability
		Shared Facilities	Publicly shared facilities
		Inter-Campus Collaboration	Inter-campus collaboration for sustainability
<b>Operations</b>	<u>Buildings &amp; Grounds</u>	Building Design and Construction	Percentage of new floor area designed and constructed to green building standards
		Building Operations and Maintenance	Percentage of existing buildings managed for sustainability performance
		Water Use	Potable water use per person

			Potable water use per square meter
			Systems for recovery and return
			Ratio of water recovered/returned to water withdrawal
		Ecologically Managed Grounds	Organic landscaping/grounds services
			Ratio of ecologically managed green space to total managed green space
	<u>Energy &amp; Climate</u>	Energy Use	Energy consumption per square meter
			Energy consumption per person
			Percentage of energy from renewable sources
			Percentage of electricity from on-site or certified renewable sources
		GHG emissions	Greenhouse gas emissions inventory and disclosure
			Greenhouse gas emissions per square meter
			Greenhouse gas emissions per person
			Adjusted net greenhouse gas emissions
	<u>Food Dining</u>	Dining Service Procurement	Percentage of food and beverage spent that meets sustainability criteria
			Percentage of dining service spent on social impact suppliers
		Food Recovery	Food recovery program
	<u>Procurement &amp; Waste</u>	Sustainable Procurement System	Supplier code of conduct
			Percentage of bid solicitations that identify sustainability considerations
			Average weight given to sustainability considerations in bid appraisal
Purchased Goods		Percentage of cleaning products spend that meets sustainability criteria	

Planning & Administration			Percentage of electronics spend meets sustainability criteria
			Percentage of furniture spend that meets sustainability criteria
			Percentage of office paper spend that meets sustainability criteria
		Materials Management	Surplus and reuse programs
			Single-use disposable plastics program
			Electronic waste management
			Hazardous waste management and disclosure
		Waste Generation and Recovery	Non-hazardous waste generated per person
			Non-hazardous waste generated per square meter
			Percentage of non-hazardous waste diverted from disposal
			Percentage of construction and demolition waste diverted from disposal
		<u>Transportation</u>	Vehicle Fleet
	Commute Modal Split		Percentage of students and employees using more sustainable commuting options
	Air Travel		Air travel disclosure, reduction, and mitigation
	Planning & Administration	<u>Coordination &amp; Planning</u>	Sustainability Coordination
Commitments and Planning			Public sustainability commitment
			Measurable sustainability objectives
			Climate resilience assessment and planning
		Student participation in governance	

		Institutional Governance	Academic staff participation in governance
			Non-academic staff participation in governance
			Community participation in governance
	Investment	Sustainable Investment Program	Sustainable investment policy or committee
			Investor Engagement
		Investment Holdings	Percentage of the investment pool allocated to positive sustainability investments

**Table 5:** Summary of STARS' Indicators (STARS Technical Manual, 2024)

SDGs	Metrics	Indicators
SDG #6 – Clean Water and Sanitation	Research on clean water and sanitation	Proportion of papers in the top of 10 per cent of journals as defined by Citescore
		Field-weighted citation index of papers
		Number of publications
	Water Consumption	Water consumption tracking
		Water consumption per person
	Water usage and care	Process to treat wastewater
		Process to prevent polluted water entering water system
		Free drinking water for students, staff and visitors
		Building standards to minimize water use
		Landscape planting to minimize water usage
	Water reuse	Policy to maximize water reuse across university
		Measure the reuse of water across university
	Water in the community	Educational opportunities for local communities to learn about good water management
		Promote conscious water usage on campus and in wider community
		Support water conservation off campus
Sustainable water extraction technologies on associated university grounds on and off campus		
Cooperate with local, regional, national or global governments on water security		
SDG #7 – Affordable and clean energy	Research on affordable and clean energy	Proportion of papers in the top 10 percent of journals as defined by Citescore
		Field-weighted citation index of papers
		Number of publications
		Policy to ensure all renovations or new builds follow energy efficiency standards

	University measures towards affordable and clean energy	Plans to upgrade existing buildings to higher energy efficiency rating
		Process for carbon management and reducing carbon dioxide emissions
		Plan to reduce overall energy consumption
		Reviews to identify areas where energy waste is highest
		Policy on divesting from carbon-intensive energy industries, notably coal and oil
	Energy use	This is defined as the energy used per floor space of university buildings. It measures units of energy used by an individual, event, organization, or product at the university
	Energy and the community	Programs for local community to learn about the importance of energy efficiency and clean energy
		Promote public pledge on 100 per cent renewable energy beyond the university
		Services aimed at improving energy efficiency and clean energy for local industry
		Inform and support governments on policy development related to clean energy and energy-efficient technology
Assistance for start-ups that foster and support a low-carbon economy and technology		
SGD #11 – Sustainable Cities and Communities	Research on sustainable cities and communities	Proportion of papers in the top 10 per cent of journals as defined by Citescore
		Field-weighted citation index of papers by the university
		Number of publications
	Sustainable practices	Targets around sustainable commuting
		Promote sustainable commuting
		Encourage telecommuting, remote working or condensed working weeks
		Provide priority to pedestrians on campus
		Work with local authorities on planning issues
		Build to sustainable standards

		Build on brownfield sites
SDG #12 – Responsible Consumption and Production	Research on responsible consumption and production	Proportion of papers in the top 10 per cent of journals as defined by Citescore
		Field-weighted citation index of papers produced by the university
		Number of publications
	Operational measures	Policy on ethical sources of goods
		Policy on appropriate disposal of hazardous waste
		Policy to measure amount of waste sent to landfill and amount recycled
		Policy on minimizing the use of plastics
		Policy on minimizing the use of disposable items
		Evidence that these policies also apply to outsourced services
		Evidence that these policies also apply to outsourced suppliers
	Proportion of recycled waste	Measure the amount of waste generated and recycled across the university
		Proportion of waste recycled
	Publication of sustainability report	
SDG #13 – Climate Action	Research on climate action	Proportion of papers in the top 10 per cent of journals as defined by Citescore
		Field-weighted citation index of papers produced by the university
		Number of publications
		Measure the amount of low-carbon energy used

	Low-carbon energy use	Proportion of electricity from low-carbon sources
	Environmental education measures	Provide local education programs or campaigns on climate change
		Existence of a university climate action plan shared with local government and community group
		Work with local or national government to plan for climate change disasters that may include the displacement of people
		Inform and support government on issues associated with climate change
		Collaborating with NGOs on climate adaptation
	Commitment to carbon neutral university	Commitment to carbon neutrality
Achieve-by date		
SDG #17 – Partnerships for the Goals	Research	Proportion of academic publications with co-authors from lower- or lower-middle-income country
		Number of publications that relate to the 17 SDGs
	Relationships to support the goals	Relationships with regional NGOs and government for SDG policy
		Cross-sectoral dialogue about SDGs with government or NGOs
		Collaborating internationally to capture data relating to SDGs
		Working internationally to develop best practice on tackling SDGs
		Collaborating with NGOs to tackle SDGs through student volunteering programs, research programs or educational resources
	Publication of SDG reports	
	Education on the SDGs	Commitment to meaningful education around the SDGs across the university, relevant and applicable to all students
		Dedicated courses (full degrees, or electives) that address sustainability and the SDGs

		Dedicated outreach educational activities for the wider community, which could include alumni, local residents, displaced people
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**Table 6:** Summary of Times Higher Education Ranking's Indicators (Impact Rankings Methodology 2024, 2024)

## Appendix B: Interview administered to the UCP-CRP leaders

### I. Contexto

O meu Trabalho Final de Mestrado é sobre sustentabilidade ambiental nos campus universitários e optei por fazer um estudo de caso que incide sobre o Campus da Universidade Católica do Porto.

O meu objetivo é fazer um exercício de benchmarking face às melhores práticas e avaliar os esforços da Universidade Católica Portuguesa no Porto em direção à tão necessária mudança para um mundo mais sustentável, nomeadamente os passos para a implementação de um campus sustentável e avaliar as componentes que estão a ser consideradas pelos rankings de sustentabilidade ambiental aplicados às universidades.

### II. Informação recolhida

No decorrer da minha pesquisa deparei-me com diversos programas curriculares criados pela Universidade com foco na sustentabilidade, nomeadamente:

- a pós-graduação em “Sustentabilidade e Regeneração”;
- a formação executiva “Chief Sustainability Officer”
- o programa internacional “Global Responsible Leadership for Sustainable Transformation”
- a unidade curricular opcional de Mestrado “Sustainability and Business Innovation”

o que demonstra a aposta da Católica na educação para esta temática.

Encontrei também o relatório “Católica Porto Business School PRME Sharing Information on Progress Report” e o “Plano de Desenvolvimento Estratégico

2021-2025 (Agenda da UCP para a Sustentabilidade)”, que se referem a todas as dimensões do conceito de sustentabilidade: económica, social e ambiental e em que a Católica Porto Business School afirma conduzir as suas atividades e operações com base nos princípios dos ODS.

Particularmente, no relatório de 2023, são já referidas medidas como:

- Disponibilização de locais próprios para depositar lixo reciclável;
- Incentivo a deslocações através de meios de transporte menos poluentes;
- Aposta na utilização de lâmpadas LED.

No mesmo relatório é ainda disponibilizada uma lista de Trabalhos Finais de Mestrado que foram elaboradas com foco na sustentabilidade ambiental, o que demonstra também o incentivo para a pesquisa nesta área.

No entanto, relativamente à Agenda da UCP para a Sustentabilidade, fiquei sem perceber se o mesmo é transversal a todos os campus universitários da Universidade Católica Portuguesa e de que forma a Universidade pretende honrar os seguintes compromissos que assume:

- Investir na qualificação e utilização eficiente das infraestruturas incorporando as melhores práticas pedagógicas e ambientais;
- Preparar a transição energética, reduzindo a pegada ecológica;
- Acelerar a transição digital nas suas diversas dimensões;
- Assegurar uma gestão responsável de consumos (Plásticos, Papel, Água, Energia).

Se possível, gostaria, então, que me esclarecesse em relação a estas questões:

1 – O Plano de Desenvolvimento Estratégico 2021-2025 (Agenda da UCP para a Sustentabilidade) é transversal a todos os campus universitários da Universidade Católica Portuguesa?

2- Se sim, qual o compromisso do campus do Porto para a concretização do plano? Como está a ser medido o progresso para o cumprimento do mesmo?

Finalmente, ainda tomei conhecimento da criação do INSURE.hub que, segundo percebi, tem o objetivo de aconselhar e providenciar suporte às empresas na procura de alternativas sustentáveis no desenvolver das suas operações e de atuar numa dimensão de consciencialização junto das mesmas e do meio académico.

Contudo, gostaria de aprofundar o conhecimento relativamente à Universidade dado o objetivo que defini acima, colocando algumas questões de acordo com as componentes que estão a ser avaliadas pelos rankings de sustentabilidade ambiental aplicados às universidades.

### III. Práticas para um campus sustentável

#### 1. Conhecimento

##### a. Educação

- i. Existem mais programas educativos com foco na sustentabilidade ambiental para além dos que referi inicialmente?
- ii. A universidade promove a formação para a sustentabilidade dos membros da sua comunidade? De que forma?
- iii. Existe algum programa de aprendizagem aplicada no âmbito da sustentabilidade?
- iv. Existe alguma ferramenta de avaliação para testar o conhecimento e literacia sobre sustentabilidade dos estudantes e profissionais pertencentes à comunidade académica?

##### b. Investigação

- i. Qual é a aposta da universidade em investigação sobre sustentabilidade ambiental?
- ii. Que incentivos são providenciados pela universidade para os membros da comunidade académica apostarem em investigação no âmbito da sustentabilidade?
- iii. A universidade tem algum centro, instituto ou unidade de investigação direcionado apenas para a sustentabilidade?

## 2. Envolvimento

### a. Envolvimento do campus

- i. Que atividades orientadas para a sustentabilidade são desenvolvidas pela universidade (por exemplo eventos, seminários, workshops, etc.)?
- ii. Como é que a universidade comunica o seu progresso e iniciativas adotadas para a implementação de um campus mais sustentável?
- iii. A universidade tem algum programa de envolvimento na temática da sustentabilidade dirigido aos trabalhadores da universidade?
- iv. Que instrumentos de consciencialização para a adoção de comportamentos ambientalmente sustentáveis são providenciados pela universidade?

### b. Envolvimento do público

- i. A universidade estabeleceu alguma parceria ou relação colaborativa com o foco de promover uma cultura mais sustentável? Que benefícios para transição para uma comunidade mais sustentável resultam dessas parcerias?

## 3. Operações

### a. Infraestruturas e terrenos

- i. Os edifícios construídos no campus obedecem às normas de algum green standard relacionadas com energia, qualidade do ar, materiais/desperdício, mobilidade, água, etc.? Que políticas sustentáveis foram adotadas na construção dos edifícios bem como nas obras recentemente realizadas?
- ii. Existe um foco na criação e manutenção de espaços verdes e áreas naturais no campus? Existe algum projeto em curso?
- iii. Como é contabilizada a água total consumida?
- iv. Existe alguma política de aproveitamento da água desperdiçada? Se sim, qual é o seu processo de tratamento e tecnologias implementadas?
- v. Que políticas são implementadas para promover o consumo mínimo e eficiente de água potável?

### b. Energia e Clima

- i. Como é feita a contabilização da energia total utilizada?
- ii. Quais são as principais fontes de energia utilizadas pela universidade?

- iii. Existem estratégias para aumentar a proporção de energia proveniente de fontes renováveis?
  - iv. Quais são as medidas implementadas pela Universidade para promover uma utilização eficiente da energia e uma diminuição global do consumo energético?
- c. Alimentação
- i. A comida providenciada pela universidade obedece a critérios sustentáveis?
  - ii. Qual é a política implementada relativa ao desperdício alimentar?
- d. Materiais e Desperdício
- i. Como é que a universidade assegura e incentiva a compra, produção e utilização de produtos ambientalmente sustentáveis (por exemplo, produtos de limpeza, equipamentos eletrónicos, mobília)?
  - ii. Que ações são implementadas no sentido de reduzir a utilização de plásticos ou outros materiais de utilização única/ descartáveis (por exemplo, embalagens de comida, copos, utensílios, etc.)?
  - iii. O que acontece a todos os materiais e equipamentos que não vão ser mais utilizados? Existe algum programa de revenda, doação ou reutilização no qual toda a comunidade académica pode participar?
  - iv. Como é feita a contabilização de resíduos produzido no campus? Que medidas são aplicadas para um tratamento sustentável dos mesmos? E dos resíduos eletrónicos?
  - v. Que políticas de redução, reutilização e reciclagem de materiais estão a ser implementadas na universidade?
- e. Transporte
- i. Que políticas são adotadas na promoção da prática de mobilidade sustentável? Que políticas são implementadas pela universidade para incentivar a utilização de veículos sem emissões de carbono associadas?
  - ii. Que iniciativas ou estratégias foram implementadas para providenciar diferentes opções sustentáveis de mobilidade para os membros da comunidade académica como, por exemplo, criação de plataformas para carpooling entre os

alunos, introdução de serviços de rent-a-bike, ou criação de um serviço de autocarros exclusivo a membros da UCP com circuito limitado até determinados pontos da cidade e com horários compatíveis com os horários da universidade?

#### 4. Planeamento e Administração

##### a. Coordenação e planeamento

- i. A universidade tem algum departamento unicamente focado em sustentabilidade que coordene os progressos dentro desta mesma temática de forma transversal a toda a instituição?
- ii. A universidade realizou publicamente algum compromisso sobre a sua missão e visão sobre o seu caminho para a sustentabilidade? Como é que a universidade comunica o seu planeamento e progresso para a implementação de um campus mais sustentável?
- iii. Que políticas são implementadas pela universidade para conduzir a que a comunidade académica aja em concordância com os ODS?
- iv. Que iniciativas de colaboração com entidades locais foram implementadas para contribuir para o desenvolvimento local?

##### b. Investimento

- i. A universidade destacou a sustentabilidade como prioridade nas suas decisões de investimento?

## Appendix C: Survey administered to UCP-CRP community

Este inquérito será administrado aos membros da comunidade académica e não-académica da Universidade Católica Portuguesa, Porto (UCP) no âmbito da realização da dissertação de Mestrado em Gestão “Sustentabilidade nos Campus Universitários”. O seu objetivo é compreender qual é a perceção da comunidade sobre os esforços desempenhados pela universidade na transição para uma Católica mais sustentável na dimensão ambiental.

### I. Informação Básica

Papel na Universidade:

- Estudante
- Professor
- Colaborador

Função? \_\_\_\_\_

Faculdade:

- Católica Porto Business School
- Escola das Artes
- Escola Superior de Biotecnologia
- Faculdade de Direito
- Faculdade de Educação e Psicologia
- Faculdade de Teologia
- Faculdade de Ciências da Saúde e Enfermagem

Ciclo de Estudos:

- Licenciatura
- Mestrado
- Doutoramento

Género:

- Masculino
- Feminino
- Outro
- Prefiro não dizer

Idade:

- 18-24
- 24-29
- 30-39
- 40-49
- 50-59
- 60-69

## II. Objetivos de Desenvolvimento Sustentável

1. Sabe o que são os objetivos de desenvolvimento sustentável?
  - Sim
  - Não
2. Alguma vez leu ou ouviu falar dos Objetivos de Desenvolvimento Sustentável (ODS) nas comunicações digitais da UCP?
  - Sim
  - Não
3. Alguma vez reparou em algum instrumento de consciencialização para os Objetivos de Desenvolvimento Sustentável (ODS) no campus da UCP ou em qualquer um dos seus meios de comunicação?
  - Sim
  - Não
    - a. Se sim, qual?
4. De que forma é que considera que a UCP está envolvida com os ODS?
  - (1 – Muito pouco envolvida a 5 – Muito envolvida)
5. De que forma o quotidiano da UCP está alinhado com os ODS?
  - (1 – Muito pouco alinhado a 5 – Muito alinhado)

6. Considera que a Universidade implementa medidas sustentáveis no âmbito dos seguintes ODS?

ODS	Sim	Não	Se sim, quais?
ODS #6 - Água Potável e Saneamento			
ODS #7 - Energias Renováveis e Acessíveis			
ODS #11 - Cidades e Comunidades Sustentáveis			
ODS #12 - Produção e Consumo Sustentáveis			
ODS #13 - Ação Climática			
ODS #17 - Parcerias para a implementação dos objetivos			

III. Políticas Implementadas pela Universidade				
	Sabe se a UCP....	Sim	Nã o	Se sim, quais?
7.	oferece programas curriculares sobre sustentabilidade ambiental?			
8.	providencia instrumentos de avaliação para testar os seus conhecimentos sobre sustentabilidade ambiental?			
9.	providenciou informações sobre as práticas ambientalmente sustentáveis do campus quando foi integrado na comunidade universitária?			
10.	implementa alguma medida para reduzir o consumo e o desperdício de água potável?			
11.	implementa alguma medida para aumentar a eficiência e a responsabilidade no consumo de água potável?			
12.	implementa alguma medida para reduzir o consumo e o desperdício de energia?			

13	implementa alguma medida para aumentar a eficiência e responsabilidade no consumo de energia?			
14	aposta em fontes de energia renovável?			
15	utiliza materiais e equipamentos que cumprem critérios de restrição ao impacto ambiental (rótulo verde)?			
16	implementa medidas para incentivar a escolha por produtos mais sustentáveis?			
17	implementa alguma medida para conscientização para a problemática das alterações climáticas?			
18	implementa alguma medida para enfrentar as consequências para as alterações climáticas?			
19	implementa alguma medida para garantir alimentação sustentável no campus?			
20	tem algum programa de incentivo à adoção de hábitos alimentares sustentáveis?			

21	tem algum programa para fazer face ao desperdício alimentar?			
22	tem algum programa para o tratamento de resíduos ou equipamentos fora de utilização?			
23	implementa alguma medida para a troca de bens fora de utilização entre a comunidade universitária?			
24	implementa alguma medida para incentivar a comunidade a deslocar-se de forma mais sustentável?			

25. Que ferramentas são utilizadas pela UCP para comunicar as suas práticas sustentáveis?

- Email;
- Website;
- Redes Sociais;
- Cartazes;
- Outros. Quais\_\_\_\_\_?

26. A UCP desenvolve atividades extracurriculares com o foco na sustentabilidade ambiental? (Sim/Não).

Se sim, quais?

27. Alguma vez participou nessas atividades? (Sim/Não).

Se não, porquê?

Se for estudante responda apenas às questões 28 a 32 (inclusive). Se for docente responda às questões 33 a 37 (inclusive). Se pertencer ao restante staff da UCP responda apenas à questão 38.

#### **Questões dirigidas apenas a estudantes**

28. Tens alguma unidade curricular no teu ciclo de estudos sobre sustentabilidade ambiental? (Sim/Não)

29. Os conteúdos das unidades curriculares em que estás inscrito focam-se em algum momento em questões de sustentabilidade ambiental? (Sim/Não)

30. Estarias interessado em que a temática da sustentabilidade ambiental fosse introduzida na tua formação académica? (Sim/Não)

a. De que forma?

31. Consideras que a UCP aposta em investigação sobre a temática da sustentabilidade ambiental? (Aposta pouco 1 – Aposta muito 5)

32. Tens conhecimento da existência de alguma organização estudantil dentro da UCP com foco na sustentabilidade ambiental? (Sim/Não)

a. Se sim, quais?

#### **Questões dirigidas apenas a docentes**

33. Leciona alguma unidade curricular sobre sustentabilidade ambiental? (Sim/Não)

34. Os conteúdos das unidades curriculares que leciona focam-se em algum momento em questões de sustentabilidade ambiental? (Sim/Não)
- a. Se não, porquê?
35. A UCP incentiva a integração dessas questões nas unidades curriculares que leciona? (Sim/Não)
36. A UCP fornece algum incentivo para que diversifique ou intensifique a sua formação na área da sustentabilidade ambiental? (Sim/Não)
37. Considera que a UCP aposta em investigação sobre a temática da sustentabilidade ambiental? (Aposta pouco 1 – Aposta muito 5)

**Questões dirigidas apenas a colaboradores**

38. A UCP fornece algum incentivo para que diversifique ou intensifique a sua formação na área da sustentabilidade ambiental? (Sim/Não)



Appendix D: Gap Analysis and conclusions regarding sustainability measures implemented by UCP-CRP and academic community perceptions

Category	Impact Area	Measures implemented by universities recognized in the literature	Implemented by UCP-CRP?	Mentioned by the university stakeholders?	Gap analysis and Conclusions
Academics	Curriculum	Availability of sustainability-focused degrees	Yes	Yes	<p>UCP-CRP has a sustainability-focused diverse and extensive educational program which relies on different degrees and curricular units with a strong orientation for sustainability. Beyond these structured programs, some curricular units and degrees naturally incorporate sustainability concepts, guaranteeing that some students understand sustainability concepts.</p> <p>The university also extends their educational beyond classroom boundaries developing practical projects such as the “Projeto das Mil Árvores”, the “Natureza é a melhor sala de aula” and those developed by the</p>
		Availability of sustainability-focused curricular units	Yes	Yes	
		Addressing sustainability topics within diverse curricular units	Yes	Yes	
		Publishing sustainability course listings	Yes	No	
		Support for academic employees to integrate sustainability into the curriculum	Yes	Yes	

		Availability of degrees with sustainability-focused learning requirements	Yes	Yes	INSURE.hub, aligning students and teachers' practical preferences regarding learning and teaching approaches.  However, it is necessary to develop a mechanism that allows the assessment of the academic community literacy towards sustainability, to ensure the effectiveness of educational sustainability measures.
		Availability of other educational activities for academic and wider communities concerning sustainability and SDGs (e.g. seminars, workshops, conferences)	Yes	Yes	
		Availability of applied learning programs for sustainability education	Yes	Yes	
		Assessment of sustainability literacy	No	No	
	<u>Research</u>	Engagement in sustainability research	Yes	Yes	UCP-CRP also fosters a sustainable culture through its research activities. The Centre for Biotechnology and Fine Chemistry, based in the School of Biotechnology, works within four Thematic Lines directly related to sustainability. Moreover, the university's researchers are required to follow a conduct guide that instructs
		Incentives for sustainability research	Yes	Yes	

		Availability of a sustainability-focused research center, institute, or unit	No	No	<p>them to adhere to sustainable and resource-efficient research procedures.</p> <p>Additionally, a significant percentage of master's degree dissertation themes proposed by faculty members are related to sustainability topics.</p> <p>Nevertheless, having a centralized sustainability-focused research center would enhance collaboration, interdisciplinary research and knowledge dissemination regarding environmental sustainability.</p>
		Published ethical code of conduct for research	Yes	Yes	
		Inter-campus collaboration for responsible research and innovation	Yes	No	
<b>Engagement</b>	<b>Campus Engagement</b>	Sustainability outreach and communications	Yes	Yes	<p>To engage the academic community, UCP-CRP, together with INSURE.hub, hosts many sustainability events, seminars and conferences targeted at the academic community; organizes staff training sessions like the one realized in partnership with Lipor to educate cleaning staff on proper waste management; and uses its communication channels to raise awareness about sustainability, to promote</p>
		Assessment of the effectiveness of sustainability communications	No	No	
		Publishing news about sustainability ongoing events	Yes	Yes	

		Advertise the established university sustainability goals	Yes	Yes	<p>implemented measures and ongoing events and to encourage sustainable behaviors.</p> <p>Nevertheless, these communications were revealed to have limitations regarding their effectiveness. The academic community has a low perception of seeing anything related to the SDGs in the university communication channels. Students, teachers and researchers and staff affirm that the university and its daily activities alignment with the SDGs is only moderate. Moreover, generically, the academic community does not know if the university implements any measures towards the accomplishment of environmental SDGs and, consequently, struggles to identify such measures.</p> <p>Additionally, the university should motivate the development and dissemination of sustainability students' organizations, young entrepreneurship sustainability projects, sustainability-focused co-</p>
		Advertise the university sustainability accomplishments	Yes	Yes	
		Provide information to applicants and students regarding university's environmental projects and initiatives at open and reception days	No	No	
		Availability of a student sustainability-focused organization	Yes	Yes	
		Motivate young entrepreneurship by proposing the development of sustainability projects	No	No	
		Availability of sustainability-focused co-curricular activities	Yes	Yes	

		Assessment of stakeholders (teachers and researchers, staff and students) participation in sustainability activities	No	No	<p>curricular activities and teacher and staff sustainability training. Although some of these initiatives are already in progress, their inherent level of awareness and participation was revealed to be notably low. Therefore, a systematic participation assessment towards these activities should be conducted by the university.</p> <p>Lastly, the university should also provide information to new students and applicants regarding sustainability measures at reception and open days to integrate them in the sustainable culture that is intended to be created.</p>
		Sustainability-focused training for employees	Yes	Yes	
		Inviting internal university stakeholders to attend sustainability-focused events	Yes	Yes	
	<u>Public Engagement</u>	Advertising education offers in sustainability	Yes	Yes	<p>The university also uses its communication channels to advertise education offers related to sustainability; to invite external stakeholders to participate in sustainability ongoing events; and to share the results of these activities.</p> <p>Furthermore, the university also engages with the external community in sharing resources, establishing</p>
		Inviting external university stakeholders to attend sustainability-focused events	Yes	Yes	
		Publishing news about ongoing sustainability- focused events	Yes	Yes	

		Sustainability-focused community partnerships	Yes	Yes	community partnerships and in supporting the development of new solutions to sustainability problems. Nevertheless, the university should develop an university-run sustainability website to condense information and to enhance visibility and transparency.
		Support for public policies to advance sustainability	Yes	No	
		Publicly shared facilities	Yes	No	
		Availability of an university-run sustainability website	No	No	
		Inter-campus collaboration for sustainability	Yes	No	
<b>Operations</b>	<u>Buildings &amp; Grounds</u>	New construction and maintenance operations obeying green building standards	Yes	No	Regarding buildings and grounds, the university implemented the following measures: new construction and maintenance operations in line with green standards (for example, through the implementation of heat conservation and energy efficient appliances); creating leisure areas within green spaces; installing water meters to detect leaks efficiently; training staff to report anomalies;
		Organic landscaping/grounds services	Yes	Yes	
		Revitalizing clean water networks	Yes	No	
		Establishing periodic plumbing fixture audits	Yes	No	

		Availability of water consumption trackers and controlling systems to detect water leaks	Yes	No	<p>implementing rainwater harvest systems; equipping faucets with sensors, timers, and flow reducers; placing awareness signs in bathrooms for water conservation; using bathroom materials designed to prevent pipe obstructions; collaborating with Águas do Porto in the development of innovative solutions to sustainable water management issues.</p> <p>It would be beneficial to the university to apply to accreditation for sustainable buildings like LEED and to try to achieve their green criteria to reduce costs, increase operational efficiency and enhance institutional reputation.</p> <p>The university stakeholders revealed a high level of awareness regarding these measures except for the ones that involve the university's water plumbing systems.</p>
		Appliance of flow reductors on water faucets	Yes	Yes	
		Appliance of timers on water faucets	Yes	Yes	
		Appliance of motion sensors on water faucets	Yes	Yes	
		Appliance of automatic mechanisms on toilet flushes	Yes	Yes	
		Collecting, managing and consuming rainwater	Yes	No	
		Systems for recovery and return	Yes	No	
		Cooperate with local, regional, national or global governments on water security	Yes	Yes	

		Promote and educate towards conscious water usage and management on campus and in wider community	Yes	Yes	
	<u>Energy &amp; Climate</u>	Utilization of LED lamps	Yes	Yes	Regarding energy and climate measures, the university is installing energy meters to detect turned on but inactive equipment and areas where energy waste is highest; implementing solar PV systems; regulating HVAC temperatures; replacing old electrical equipment with energy-saving ones; posting reminders near equipment to switch it off when not in use; instructing staff to turn off devices when not in use; constructing new buildings with centralized heating controls; replacing standard light bulbs with LEDs; training staff to report irregularities; utilizing centralized controls to prevent equipment from being unintentionally left on; and setting sensors and timers on equipment to power down after inactivity.
		Utilization of motion sensors on buildings' lights	Yes	Yes	
		Utilization of renewable energy	Yes	Yes	
		Regulating HVAC temperatures	Yes	No	
		Replace old electrical equipment with energy-saving ones	Yes	No	
		Limit the use of elevators to people with reduced mobility and volume transportation	No	No	
		Plans to improve energy efficiency on existing buildings	Yes	No	
		Plan to reduce overall energy consumption	Yes	No	

		Identify areas where energy waste is highest	Yes	No	<p>Currently, the university is also developing additional efforts to install more solar panels and, together with the INSURE.hub and other external entities, is realizing innumerable awareness and educational activities regarding climate change.</p> <p>However, the university should consider implementing additional measures like limiting the use of elevators only to people with reduced mobility or in situations where volumes are being transported and adjust school schedules to make the most of natural lighting.</p> <p>It is also worth noting that the academic community was relatively aware of the energy efficiency measures implemented by the university.</p>
		Education and awareness programs about the importance of energy efficiency and clean energy	Yes	Yes	
		Provide local education and awareness programs on climate change	Yes	Yes	
		Committing to carbon neutrality	No	No	
		Inform and support government on issues related to climate change	Yes	Yes	
	<u>Food Dining</u>	Food and beverages meet sustainability criteria	Yes	Yes	<p>Concerning food and dining sustainable initiatives, the university is conducting regular meetings with outsourced cafeteria companies to monitor green criteria for food sourcing, preparation, and waste management; designing the Arts building cafeteria to</p>
		Mandatory availability of vegetable milk, gluten-free, vegetarian and vegan products	Yes	Yes	

	Vending machines with sustainable products	No	No	<p>offer sustainable options, such as vegetarian menus and to provide meals without using plastic or paper waste containers; hosting conferences on sustainable food systems; publishing research and newsletters on sustainable food practices.</p> <p>Nevertheless, the approach to this impact area must be strengthened. Expanding food offerings to include sustainable vending machines and take-home food sales would increase accessibility to more sustainable food options. Implementing food recovery programs, composting programs, community gardens and refurbishing kitchens would represent a crucial step towards an adequate food waste management system.</p> <p>Digital tools like a campus menu app and clear labeling of food characteristics would improve transparency and awareness. Finally, mandatory cookery workshops and staff training could foster a more engaged and responsible community.</p>
	Sustainable food products sales spaces (offering the possibility to take food home)	No	No	
	Availability of community gardens and composting programs	No	No	
	Availability of an app that informs on campus menu options	No	No	
	Labeling: disposal of information regarding the product characteristics (ingredients, whether it is organic or not, etc.)	No	No	
	Availability of a food recovery program	No	No	
	Developing mechanisms for monitoring the sustainability specifications included in the contracts	Yes	No	

		Adapting kitchen conditions to facilitate sustainable ways of cooking and management of food waste	No	No	These additional efforts regarding sustainable food systems are crucial, since the academic community generically does not know if the university implements any measures towards this impact area, and, consequently, struggles to identify them.
		Cookery workshops for community regarding sustainable food and waste food management (mandatory for staff)	No	No	
		Training and awareness actions on campus related to sustainable food systems	Yes	Yes	
	<u>Procurement &amp; Waste</u>	Supplier sustainable code of conduct	Yes	No	To ensure a sustainable procurement and waste strategy, UCP-CRP is Establishing green compliance criteria for supplier contracts; using cleaning products that meet green standards; designing a waste management strategy in partnership with LIPOR; prioritizing products with low energy consumption; selecting durable materials and equipment; installing water fountains to reduce plastic bottle usage;
		Lean management strategy regarding procurement decisions	No	No	
		Providing practical advice to the academic community on how to implement sustainable procurement	Yes	No	

		Ensuring that all university departments follow a sustainable approach in their purchasing decisions	Yes	No	<p>transitioning to digital teaching platforms to minimize printed materials; using lower-density paper for printing; configuring printers for double-sided and black-and-white printing; reusing and donating unused materials and equipment; placing recycling bins strategically (e.g., near printers and cafeterias); implementing waste treatment protocols for science labs and art studios; organizing workshops and training sessions on sustainability topics; and creating notebooks from recycled paper.</p> <p>It is worth noting that procurement sustainable measures are the least recognized by the academic community. Most of the university stakeholders do not know if there are measures being implemented towards this impact area and is unable to identify any measure.</p>
		Cleaning products meet sustainability criteria	Yes	No	
		Electronic products meet sustainability criteria	Yes	No	
		Furniture meets sustainability criteria	Yes	No	
		Office paper meets sustainability criteria	Yes	No	
		Implementation of a recycling program on campus	Yes	Yes	
		Program to reduce paper and plastic on campus	Yes	Yes	
		Implementation of IT and E-learning applications to promote the reduction of paper use	Yes	Yes	
		Surplus and reuse programs	Yes	Yes	

		Electronic waste management	Yes	No	
		Hazardous waste management	Yes	Yes	
		Development of an educational and awareness program towards waste management	Yes	Yes	
	<u>Transportation</u>	Availability of electric cars or ZEV chargers on campus	Yes	Yes	UCP-CRP has installed electric vehicle charging stations; has set up bicycle parking facilities; collaborating with STPC to align bus schedules with class times; has implemented a parking fee; and has installed proper infrastructures to park bicycles on campus. Nevertheless, further work is required to motivate students to adopt cleaner transportation options. UCP-CRP could promote an internal carpooling app, create bike sharing or rental programs for campus users, introduce services for the academic community to travel more comfortably like a university bus that would comply with a certain city route or the providence of lockers in the university campus so students can leave their materials at the university.
		Establishment of a parking fee to discourage solo driving	Yes	Yes	
		Promote shared mobility and new technologies like a campus exclusive carpooling app	No	No	
		Implementing bicycle-sharing programs for campus users	No	No	
		Availability of proper infrastructures to park bicycles on campus	Yes	Yes	
		Coordinating bus schedules with classes	Yes	No	
		Expanding campus bus services	No	No	

		Work with local authorities on planning issues	Yes	Yes	Additionally, the university could construct dormitories or university-affiliated student residences located nearby, or encourage telecommuting, remote working or condensed work weeks. It is also crucial that the university implements measures to encourage sustainable commuting.
		Creation of dormitories or university-affiliated student residences located nearby	No	No	
		Encourage telecommuting, remote working or condensed work weeks	No	No	
		Promoting a cycling and walking culture and the adoption of sustainable means of transportation;	No	No	
		Establishing targets around sustainable commuting	No	No	
		Air travel disclosure, reduction, and mitigation	Yes	Yes	
<b>Planning &amp; Administratio</b>	<u>Coordination &amp; Planning</u>	Elaboration and publication of a sustainability strategic plan	Yes	Yes	Although UCP-CRP has developed a sustainability plan, the local campus autonomy in implementing sustainability initiatives provides the opportunity for UCP-CRP to develop a sustainability plan that
		Elaboration and publication of a sustainability report	No	No	

		Establish, track and publish sustainability objectives that allow monitoring progress towards the accomplishment of the sustainability strategic plan	No	No	<p>considers specific challenges and opportunities regarding its own sustainable transition.</p> <p>Currently, the university lacks a centralized sustainability framework, evident in the absence of a sustainability report, a sustainability coordinating committee, and limited engagement from the academic community in sustainability governance. Addressing these gaps and strengthening the role of the SDGs as a powerful guidance tool would provide a more cohesive sustainability transition.</p> <p>Finally, a sustainable investment strategy would be crucial for the successful implementation of these initiatives, ensuring that financial resources align with the university's long-term commitments.</p>
		Report regularly on progress	No	No	
		Evaluating the university's environmental and economic performance to persuade decision-makers to implement sustainability measures	Yes	No	
		Availability of a coordinating committee or office for sustainability	No	No	
		Participating in sustainability ranking programs	No	No	
		Students, teachers and researchers and staff participation in governance	No	No	

		Development of internal mechanisms to align the university daily activities with the SDGs	Yes	Yes	
		Promoting internal work and engagement with external entities to develop innovative solutions for achieving the SDGs	Yes	Yes	
	Investment	Sustainable investment policy or committee	No	No	
		Providing small grants to motivate students to step up to organize sustainability-focused activities	No	No	

**Table 7:** Gap Analysis and conclusions regarding sustainability measures implemented by UCP-CRP and academic community perceptions

