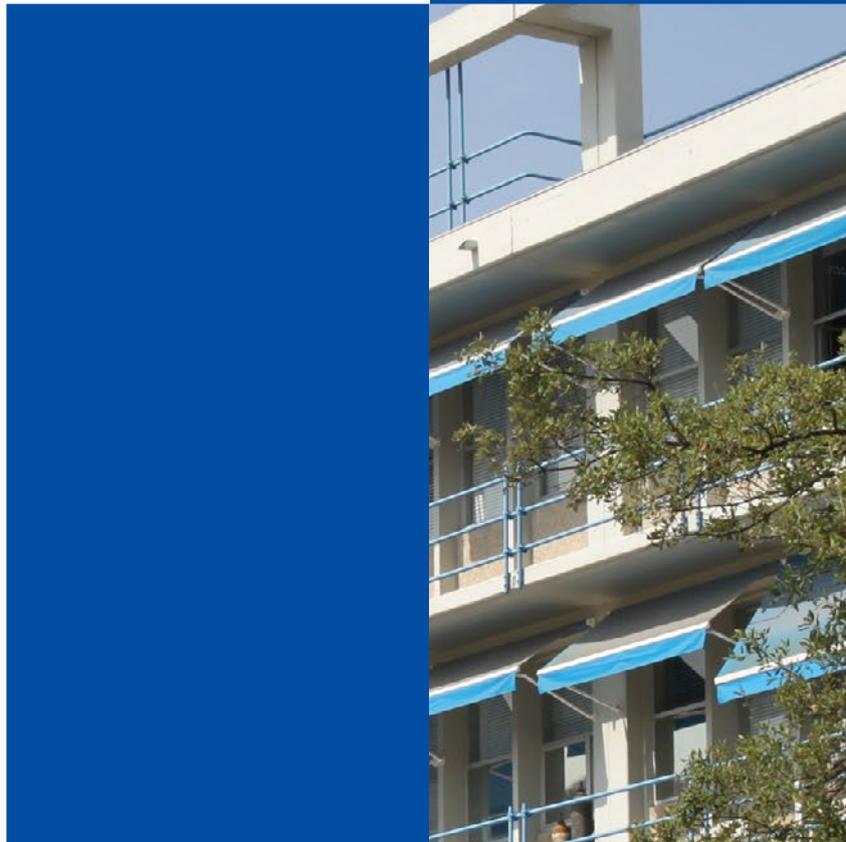




**Ciências  
ULisboa**

Faculdade  
de Ciências  
da Universidade  
de Lisboa



# CIÊNCIAS Sustainability Report 2019–2021

June 2023



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# 01/ Message from the Faculty Dean

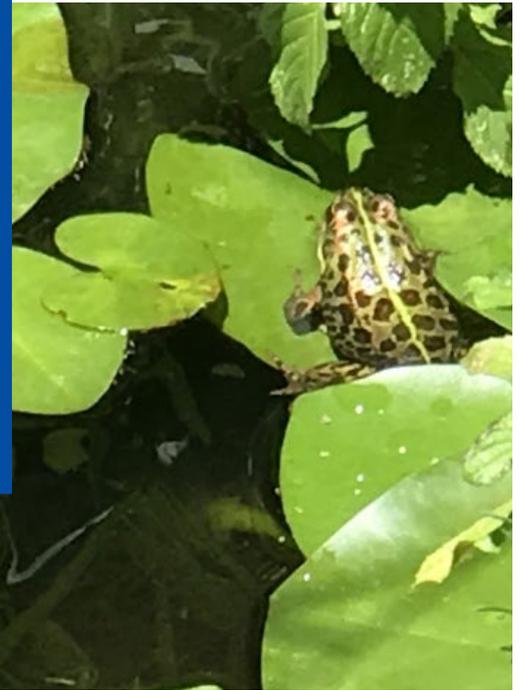


This report reflects the desire of the Faculty of Sciences of the University of Lisbon, hereafter CIÊNCIAS, to promote sustainability, disclosing the school's performance in relation to the action axes of the 2030 Agenda for Sustainable Development during 2019, 2020 and 2021. It analyses and evaluates the activities carried out in CIÊNCIAS according to the five axes, which are planet, people, prosperity, partnerships and peace, reflecting on the indicators of the last three years, which include a pre-pandemic year, a pandemic year and a post-pandemic year of resumption of activities.

I am delighted to see CIÊNCIAS in this report and in the indicators it presents. CIÊNCIAS is clearly committed to a sustainable future. It acknowledges the importance of the UN Sustainable Development Goals (SDGs), which it fully embraces. What follows fills us with pride, but also with humility. Pride, for the excellence of what we do in favour of sustainability. Humility, given how much we still have to do and want to do in this regard. Adapting the motto that has driven us in CIÊNCIAS for 112 years: what we don't do for sustainability today, we will tomorrow!

## 02/ Sustainability Policy

CIÊNCIAS endeavours to align its strategies dynamically and adjusted to the new challenges posed by the various stakeholders with whom it interacts.



The main objective of the sustainability policies adopted, which foster a culture of environmental, social and economic responsibility, has been to promote an ecosystem of innovation for sustainability in CIÊNCIAS, in balance with the well-being of all the elements of CIÊNCIAS and the community in which it operates, as well as the preservation of natural resources and the environment. In this sense, it is possible to divide the intervention of CIÊNCIAS into four main dimensions:

- Stimulating knowledge, innovation and knowledge transfer in the field of sustainability, training highly qualified professionals who are aware and capable of positively influencing the impact of their actions on the environment, society and the economy;
- Sharing and raising awareness on the principles of sustainability across the entire CIÊNCIAS community;
- Engaging the entire internal and external CIÊNCIAS community in an inclusive and participatory way, with the aim of improving performance in all the dimensions of sustainability;

- Continuously assessing and improving the environmental impact of the activities carried out in CIÊNCIAS, adjusting the management of support and operational processes and respecting the principles of social and environmental responsibility, by reducing the use of resources and the production of waste and emissions, seeking to improve the quality of life on campus.

Within the framework of the Global Compact Principles proposed by the United Nations, CIÊNCIAS is also committed to supporting its 10 Principles, which establish a set of values in various areas, namely Human Rights, Labour, Environment, Anti-Corruption, and the Sustainable Development Goals (SDGs).

As this first CIÊNCIAS report refers to 2019, 2020 and 2021 activities, from hereon sustainability reports are expected to be published every two years.

# 03/ Welcome to Ciências

Welcome to the Faculty of Sciences, one of the schools of Portugal's largest and most prestigious university - the University of Lisbon (ULisboa).

We are proud of the quality of our research and the education we provide to thousands of young people.

We keep alive the words written by Garcia de Orta more than 450 years ago, and which we have adopted as our motto:

**What we do not know today, we will know tomorrow.**

Come and meet us!

We embrace a plurality of scientific areas:

- Chemical Sciences and Technologies
- Life Sciences
- Earth Sciences
- Physical Sciences and Engineering
- Mathematical Sciences
- Computer Science and Engineering
- History and Philosophy of Science

We value the knowledge we create. We stimulate scientific curiosity.

We fulfil our mission every day:

- As an institution for the creation, transmission and dissemination of scientific and technological knowledge, we promote the education of our students through a lifelong learning culture, valuing critical thinking and intellectual autonomy;
- We endeavour to push the boundaries of scientific and technological knowledge for society;
- And we endeavour to transfer this knowledge to society, through research and education, and the transfer of knowledge and innovation in the areas of exact and natural sciences and technosciences, as well as the dissemination and sharing of cultures, stimulating a permanent openness towards society.

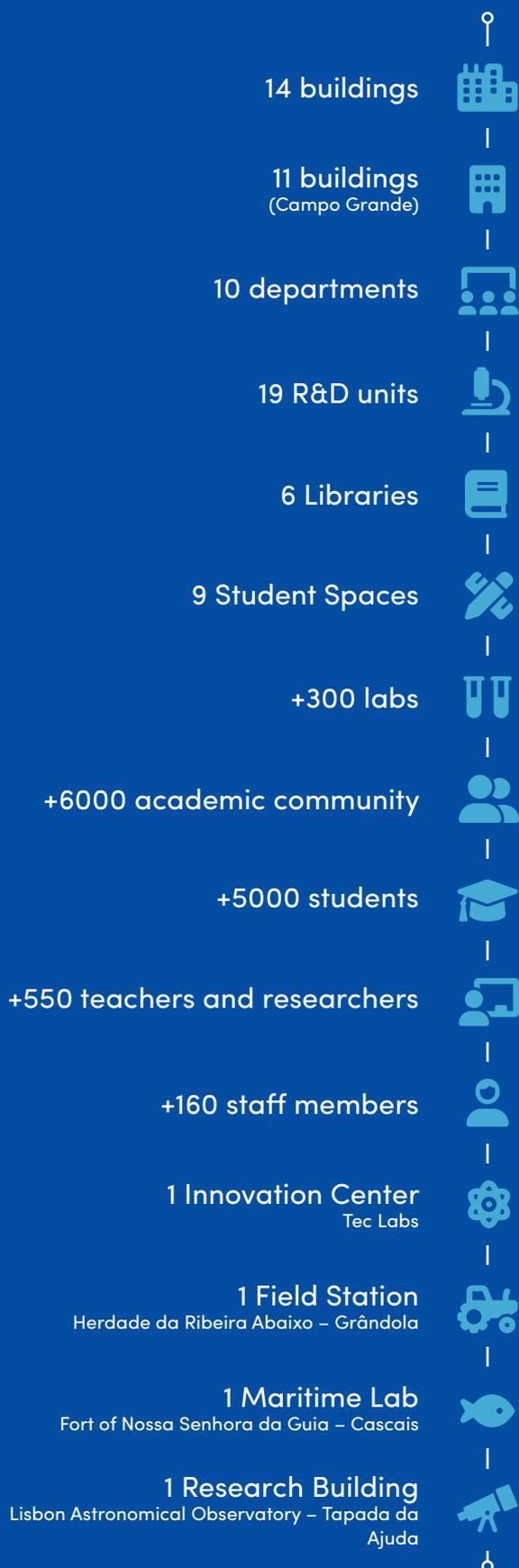


# Living CIÊNCIAS

Most of CIÊNCIAS' activities take place at the Campo Grande facilities on the Cidade Universitária Campus, a dynamic area of Lisbon with several shopping and leisure centres. Outside the campus you can find the Institute of Astrophysics and Space Sciences, which occupies a building at the Lisbon Astronomical Observatory in Tapada da Ajuda; the Guia Maritime Laboratory, located by the sea, in Cascais; and the Herdade da Ribeira Abaixo Field Station, in Grândola.

CIÊNCIAS has a range of infrastructures and services for the development of high-level research and actively encourages innovation. It is committed to preparing its students to excel in their scientific and technical skills, enabling them to respond successfully to the challenges of society.

The size of its academic community and the diversity of areas of knowledge it brings together, provide a stimulating environment, facilitating interactions between people from different scientific fields.



## Multidisciplinarity

We make it possible to build a multidisciplinary academic and scientific career. In addition to the diversity of areas it offers, it endeavours to create synergies with other institutions in order to promote training and research projects in various fields of knowledge.

≈ 25% associated courses

## Merit Award

We reward students with high academic performance, expressing our strong commitment to a demanding culture in terms of the education provided. We also reward the best teachers and the best researchers, acknowledging teaching excellence and distinguishing those who demonstrate the greatest effort and quality in their teaching activities.

230+ prizes and distinctions awarded per year

## Scientific Productivity

We encourage quality scientific production, providing innovative tools and valuing the expertise of our human resources, constantly adapting to scientific and technological developments.

≈ 1,000 scientific articles published per year

## International Cooperation

We are committed to being competitive and appealing beyond borders, promoting mobility and participating in strategic collaborations and international networks.

200+ mobility agreements

## Employability

We ease the entry to the job market by advertising job opportunities, organising initiatives with companies and holding talks and workshops on employability.

1,800+ offers per year

## Location

We are located on the Cidade Universitária Campus, in the heart of Lisbon, and are easily accessible by public transport, car or even bicycle.



# History

The Faculty of Sciences of the University of Lisbon was created under a Decree-Law of 19 April in 1911, and celebrated its first centennial in 2011.

Since its creation and until 1985, when it was transferred to its new facilities in Campo Grande, the main building of the Faculty of Sciences was located in the building that used to house the Polytechnic School, and before that, other key cultural and scientific institutes.

In addition to this shared background, the Faculty of Sciences also takes on the historical, cultural and scientific heritage of its ancestors:

- Noviciado da Cotovia (1619-1759);
- Real Colégio dos Nobres (1761-1837);
- Escola Politécnica (1837-1911).

The building on Rua da Escola Politécnica currently houses the University of Lisbon Museum (Museu Nacional de História Natural e da Ciência) - a set of important and rare museological exhibitions and a forum for scientific activities.

# Education

CIÊNCIAS' education is aligned with scientific, technological and business developments.

The 1st cycle and Integrated Masters degrees guarantee a solid and multidisciplinary basic education that equips students with the skills they need to become highly qualified professionals. The intensity of lab activity, right from the first years of the programs, is one of the hallmarks of CIÊNCIAS. In addition to formal and field education, students have the opportunity to develop an additional set of cross-cutting competencies, such as communication skills, leadership and initiative, which are designed to facilitate the process of entering the labour world.

The 2nd and 3rd cycle degrees allow students to strategically manage their academic and professional career, both by specialising and diversifying their knowledge. Postgraduate training is essentially based on courses and scientific and technological research activities provided by CIÊNCIAS' R&D units.

The protocols established with various organisations also allow final works in Masters and PhD Theses to be carried out in a business context and have a direct application in responding to society's problems.



**80+ courses**

**1,000+ graduates per year**

**5,500+ students enrolled per year**

**75%+ employability rate**

# Studying

The library network provides access to numerous physical and electronic resources, including specialised magazines and newspapers.

The Student Spaces, with free access and equipped with computers, are excellent places to study and work. In the Campo Grande Garden, close to the campus, is the Caleidoscópio Academic Centre, which also has a study room open 24 hours a day, 7 days a week.



**6 Libraries on the Campo Grande Campus**

**9 Student Spaces on the Campo Grande Campus**

# Research

The teaching labs and those used exclusively for research, have the latest equipment and high-quality scientific and technological material. The entire campus is covered by the Eduroam wi-fi.

Research is one of the pillars of CIÊNCIAS' activity, which is based on a network of research and development (R&D) units geared towards the various fields of exact and natural sciences, the respective technologies and engineering, and interdisciplinary and cross-cutting areas.

The R&D activity of the various centres, institutes and labs focuses on both fundamental aspects and applied projects linked to business, industry and strategic development.

Its role is essential in advanced training, providing students with the opportunity to take part in competitive R&D projects.

The rankings for CIÊNCIAS R&D units evaluated by the Foundation for Science and Technology prove their quality at national level. These units bring together teachers and researchers from different scientific areas of CIÊNCIAS, and many researchers from other Portuguese and foreign universities, promoting work in a stimulating and multicultural environment. Many of these highly qualified professionals are part of R&D networks or coordinate research teams, which results often receive awards and distinctions in the international scientific community.



**90% of R&D units are rated very good or excellent**

**Research Partnerships: 25%+ of researchers in CIÊNCIAS are from other universities**

**≈ 500 active R&D projects per year**

**≈ €26 M of R&D investment per year**

# Innovation

CIÊNCIAS is committed to the economic valorisation of knowledge, promoting close collaboration with business and industry. Technology transfer activities include establishing partnerships in innovative R&D projects, providing R&D services under contract and managing the intellectual property rights of CIÊNCIAS and their authors.

Tec Labs - Centro de Inovação is the hub for science and technology-based entrepreneurship initiatives. It is a space for business incubation, where specialised support is available for the development of business ideas and their implementation.

In addition to encouraging its students and researchers towards entrepreneurial behaviour and experiences, which are fundamental in a highly competitive job market, CIÊNCIAS provides the tools and means necessary for the application and execution of its innovative projects, such as the ScienceIN<sup>2</sup>Business programme. The success of these initiatives is also the result of strong interdisciplinary cooperation between the ULisboa Schools in the areas of entrepreneurship, innovation and technology management.

## **Tec Labs**

The Innovation and Entrepreneurship Area of CIÊNCIAS, recognised at national and international level with the Tec Labs trademark, is the hub for all science and technology-based entrepreneurship initiatives and connections to the business fabric.

For almost 30 years, CIÊNCIAS has supported the economic valorisation and transfer of the knowledge generated at the School, focusing on innovation, rigour and collaboration, a set of values that inspire the vision of a society that values the knowledge created in a university environment. It has two symbiotic and complementary missions:

**Valuing the knowledge** produced in CIÊNCIAS with the potential to generate innovative projects, from raising awareness and developing soft skills among students and members of the teaching/research staff towards attitudes that value entrepreneurship and the creation of value based on scientific knowledge; to facilitating the creation of entrepreneurial spin-offs by its teaching and research staff and alumni; to boosting all forms of contract research with companies and other entities in the innovation system, or institutional intervention, namely through FCIências.ID, in initiatives of this nature in the Lisbon region. Of particular note here is the development of the ScienceIN2Business® methodology, an innovative way of encouraging and supporting the economic valorisation of scientific and technological knowledge in higher education institutions and research centres. The methodology is based on annual cycles so that it can be consolidated and disseminated exponentially to an ever-increasing number of students, teachers and researchers. Each cycle is divided into three stages, designed in a sequential, interdependent and replicable logic: Learning, Selection, Evolution. In fact, it has already been at the origin of a significant number of CIÊNCIAS spin-offs.

**Incubation** of projects or start-ups, which are provided with the necessary resources for successful implementation through the management of the Tec Labs incubator.

Located on the CIÊNCIAS Campus, Tec Labs offers various types of incubation for science and technology-based companies and projects: from physical incubation in office space to lab incubation, including virtual incubation and the co-lab.

CIÊNCIAS maintains a very close relationship with all its incubated companies, even those that, for some reason, have already left. So it can be said that through Tec Labs, CIÊNCIAS has a set of approximately 50 companies which are relevant partners, with which it maintains a close relationship and constant sharing of knowledge.



**30+ companies incubated at Tec Labs**

**≈ 50 contract projects started per year**

**Training for the 3 cycles of education in the areas of Entrepreneurship and Innovation**

**Tec Labs – Centro de Inovação**



**tec labs** powered by



**Ciências  
ULisboa**



# Associations and Culture

Various cultural activities are usually organised on the ULisboa Campus, where the Students' Association and the Workers' Association play an important role of integration in CIÊNCIAS. Together with the Vicentina (academic tuna), the FC-Acto (theatre group) and other associations, they organise various recreational, social and cultural initiatives that contribute to making academic life more dynamic.

The campus is home to the Aula Magna, a cultural centre of reference in Lisbon, which hosts important events, especially shows and concerts. CIÊNCIAS also provides two gallery spaces for exhibitions.



# Health, Sports and Well-being

CIÊNCIAS is part of the University of Lisbon Campus, and as such benefits from a privileged space for practising sports, promoting health and well-being, and holding cultural activities.

The academic community has special access to the ULisboa Medical Centre. In addition to primary health care, with consultations for various medical specialities, a range of activities are available to promote physical and psychological well-being. CIÊNCIAS is also equipped with procedures, material resources and teams capable of providing first aid and psycho-pedagogical support.

The campus is home to the University Stadium of ULisboa, a communal space dedicated to sport and leisure. Its infrastructures offer different types of physical exercise, promoting active leisure activities and a healthy lifestyle.

The Students' Association of CIÊNCIAS (AEFCL) helps students to maintain a healthy lifestyle. The AEFCL offers various team sports with which students can train and compete in the University of Lisbon Championships, including basketball, football, futsal and volleyball. In addition, students practising individual sports such as athletics, swimming, orienteering, pole vaulting, taekwondo, golf, snowboarding, surfing, bodyboarding, tennis and artistic gymnastics, have the support of the AEFCL in competitions organised by the Academic University Sports Federation (FADU). All team sports training sessions take place at the University Stadium of Lisbon.



The Workers' Association of CIÊNCIAS manages a gym located in the CIÊNCIAS facilities equipped with various machines, accessories, changing rooms with showers, and can be used by members subject to availability. It also offers a range of sports at these facilities, and supports its members by covering the costs of sporting activities held elsewhere.

# Society

CIÊNCIAS is constantly seeking to get closer to global society, running various programmes that promote the existence of a consistent scientific and technological culture, regardless of age, social group or professional activity. In addition to the initiatives of teachers and researchers, there are also institutional initiatives that seek above all to attract the pre-university community to the major challenges of CIÊNCIAS, as well as to provide information about the programs and their career paths.

In addition to the numerous activities that take place at the Faculty, CIÊNCIAS participates as a founding-associate member of the Association that manages the Lousal Ciência Viva Centre, an old mine that has been transformed into an authentic 'Mine of Science', managed by two members of CIÊNCIAS.

CIÊNCIAS also has strong connections to places steeped in history that preserve important scientific collections: the National Museum of Natural History and Science, which includes the Lisbon Botanical Garden, and the Lisbon Astronomical Observatory. In addition to the exhibitions, visitors will find a wide range of activities designed to stimulate curiosity and the understanding of science and technology.

# Environment and Sustainability

The efficient use of energy and water resources and the promotion of good environmental practices, which translate into initiatives such as the recovery of recyclable waste or the implementation of internal hazardous waste management mechanisms, are among CIÊNCIAS' concerns.

CIÊNCIAS favours the use of environmentally friendly means of transport by offering spaces for parking bicycles and having 3 stations of Lisbon's shared bicycle service in the immediate vicinity of the campus.

CIÊNCIAS also has two ultra-fast charging stations for electric vehicles in front of the C3 and two more normal charging stations inside the C6 garage.

CIÊNCIAS has several ongoing projects that promote sustainability within its campus and in the surrounding area, through its [Sustainability Living Lab@ CIÊNCIAS](#) (see chapter Sustainability Living Lab). The Living Lab aims to promote an inspiring set of good practices and a sustainability innovation ecosystem on the CIÊNCIAS Campus, hosting monitoring and experimentation projects in all dimensions of sustainability.



≈ 80 secondary schools visited each year

≈ 1,300 secondary school students visit CIÊNCIAS every year

≈ 750 events per year

# Characteristics of the community

In the period covered by this report, CIÊNCIAS' community was made up of a total of around 6,400 members/year, most of whom, as expected, were students (Figure 1).

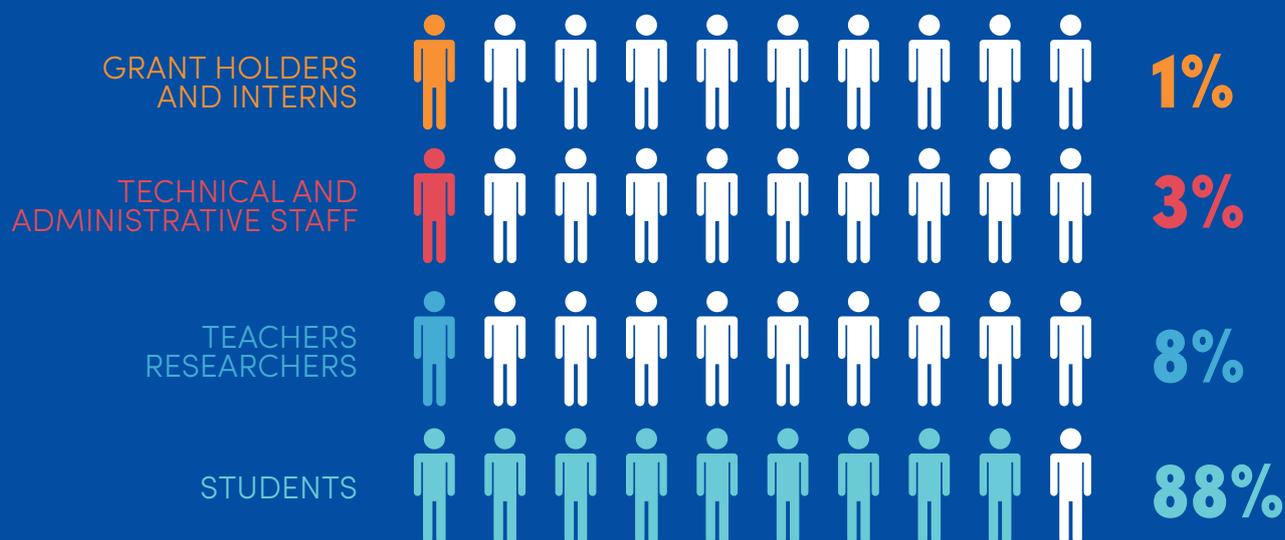


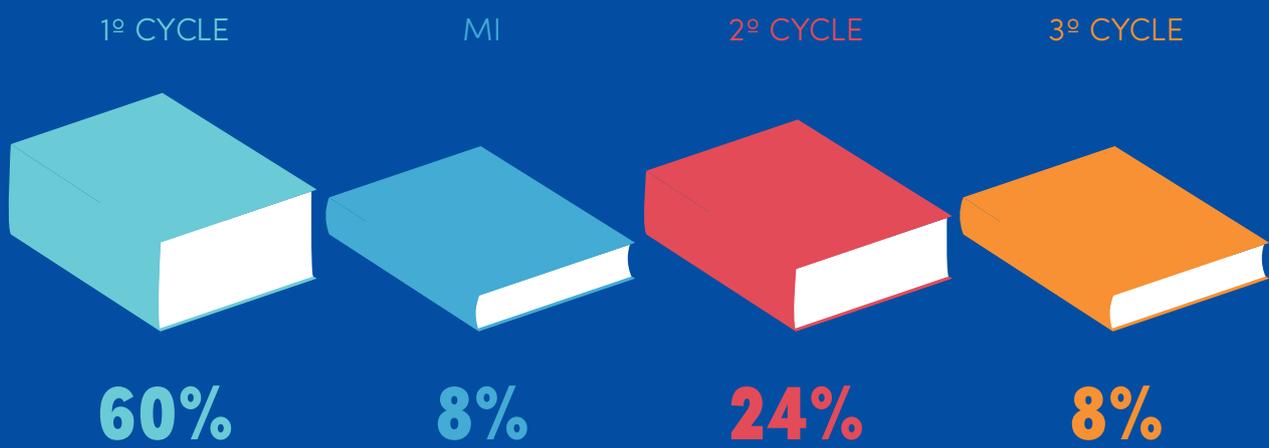
Figure 1 – Average relative weight of the main categories of members of CIÊNCIAS' community during the period in question.

The change over time in the number of members in each of these categories over the period in question is essentially characterised by a high level of stability, with only the reduction in the number of grant holders and the fact that the number of interns has always been residual. We will now analyse each of these categories of members of CIÊNCIAS'1 community<sup>1</sup>.

## Students

In the period in question, around 5,600 students were enrolled in CIÊNCIAS each year, in all study cycles. There was a slight increase of around 4.4% from 2019 to 2020 and 2.6% from 2020 to 2021. The average distribution of CIÊNCIAS' students across the different levels of education in the period analysed is shown in Figure 2<sup>2</sup>.

- 1 The fact that these two categories are completely residual has meant that this report has chosen not to differentiate between them in the statistical treatments, treating the small numbers that correspond to them as part of the other categories, depending on the type of work they do.
- 2 The percentage of students enrolled in Specialisation Courses during this period is marginal (<0.2%) and is therefore not represented in this figure.



**Figure 2** - Distribution of CIÊNCIAS' students by level of education (average over the period in question)

The figure shows that the majority of CIÊNCIAS' students are enrolled in 1st cycle programs. It should also be noted that, in a situation of normal study progression, around 3/5 of the students enrolled in MI are in fact 1st cycle students, with the remaining 2/5 being 2nd cycle students.

The average gender distribution of CIÊNCIAS' students during the period in question is shown in Figure 3. There is a higher number of male students across all types of study cycles, although the greatest asymmetry is found among 1st cycle students (59%M; 41%F), with the distribution tending towards greater balance in the case of 2nd and 3rd cycles (53%M; 47%F). This distribution remained roughly stable over the period in question.



**Figure 3** - Characterisation of students in terms of gender distribution (average over the period in question).

A closer look at gender distribution shows that there are more male enrolments in the 1st cycle, with the exception of the Biology, Biochemistry, Chemistry and Applied Math courses, where the opposite is true. In terms of general trends at all levels of education, and in the three years under analysis, it can be seen that the female gender has a preference for education in the areas of Biology and Biochemistry, and the male gender tends to opt for education in areas such as Computer Science, Physics, Geology and Math. In the area of Physics, one exception to this trend is the Integrated Masters Degree in Biomedical Engineering and Biophysics, where there are more female students enrolments.

CIÊNCIAS' students are predominantly Portuguese nationals, a reality that has not changed significantly over the period in question, as can be seen in Figure 4. It should be noted, however, that the percentage of foreign students increases significantly among 3rd cycle students, where it reaches around 19% of the total number of students enrolled, while for the other cycles the figure is around 4%. The majority of foreign students come from Portuguese-speaking countries such as Angola, Brazil, Cape Verde, Mozambique and the United States of America. There are also students from Iran, Colombia and Bangladesh, albeit in smaller numbers.



**Figure 4** - Characterisation of the student body with regard to nationality (average over the period in question).

The total number of students with special statutes (social, sports or other) fell by around 22% from 2019 to 2020 and rose again by around 7% from 2020 to 2021. On the other hand, there has been a steady increase in the number of statutes awarded to students with special educational needs and parent students, as can be seen in Figure 5.

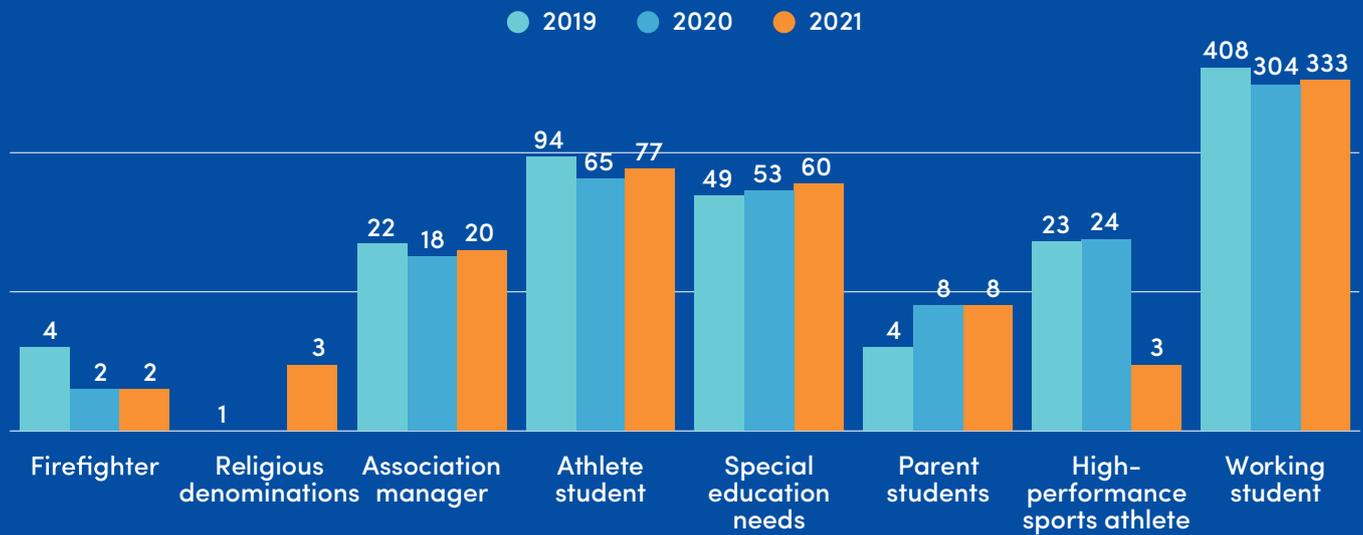
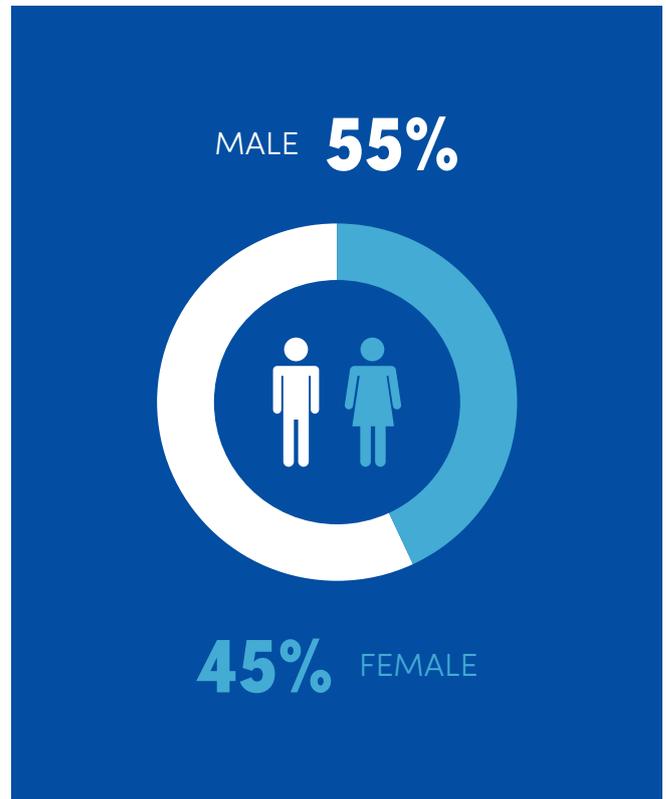


Figure 5 - Changes in the number of students with special status during the period in question.

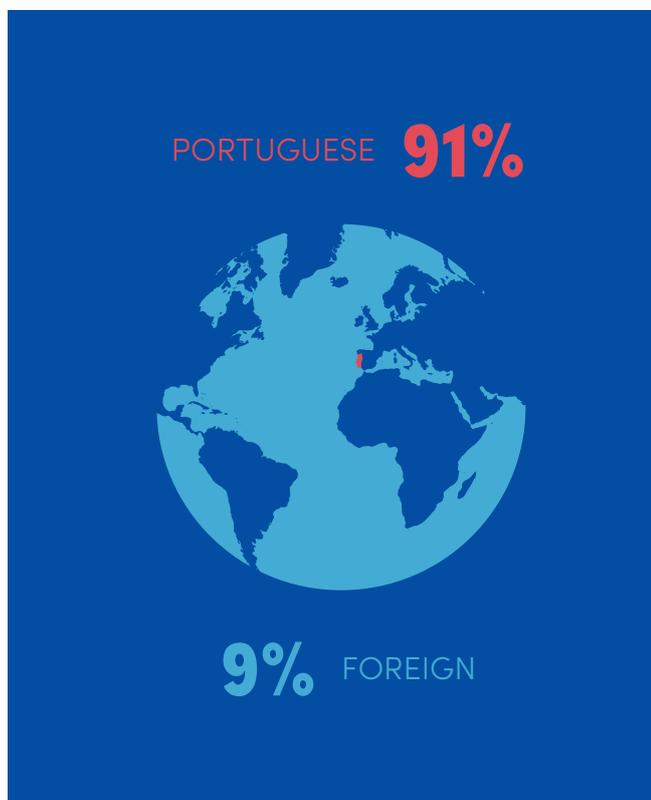


# Teachers/ Researchers

The gender distribution of the teaching and research staff has remained roughly constant over the period covered by this report, with a majority of male members (Figure 6). Although residual, there is a slight trend towards an equal distribution (a 1.6% increase in female staff from 2019 to 2020, and 0.5% from 2020 to 2021).



**Figure 6** - Characterisation of teachers/researchers in terms of gender distribution (average over the period in question).

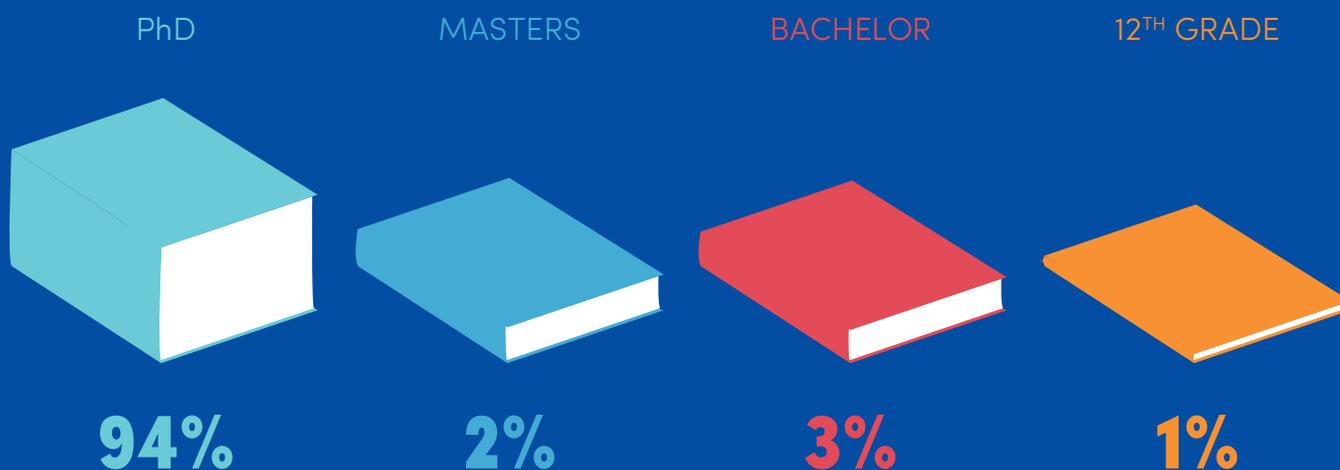


**Figure 7** - Characterisation of the teacher/researcher body with regard to nationality (average over the period in question).

CIÊNCIAS' teachers and researchers are predominantly Portuguese, a reality that has not changed significantly over the period in question (Figure 7). The majority of CIÊNCIAS's teachers and researchers of foreign nationality come from Italy, Germany, Brazil and Spain, while on a smaller number there are also teachers and researchers from Greece, Venezuela, Mozambique and Australia.

In terms of educational qualifications, the overwhelming majority of CIÊNCIAS' teachers and researchers have a PhD (Figure 8). This situation has remained practically stable over the period in question, and it should be noted that 6% of those who are not PhDs, are Guest Assistants and Monitors, the latter of whom, only have a 12th-grade education level, in the case of being Undergraduates.

The occasional use of these two types of guest teachers has been made with the primary objectives of rewarding the best students through these hires and, at the same time, making significant gains in terms of success rates in curricular units with high levels of repetition, through direct support for repeating students by members of closer age groups. This measure had a measurable impact on reducing the level of repetition in these curricular units.



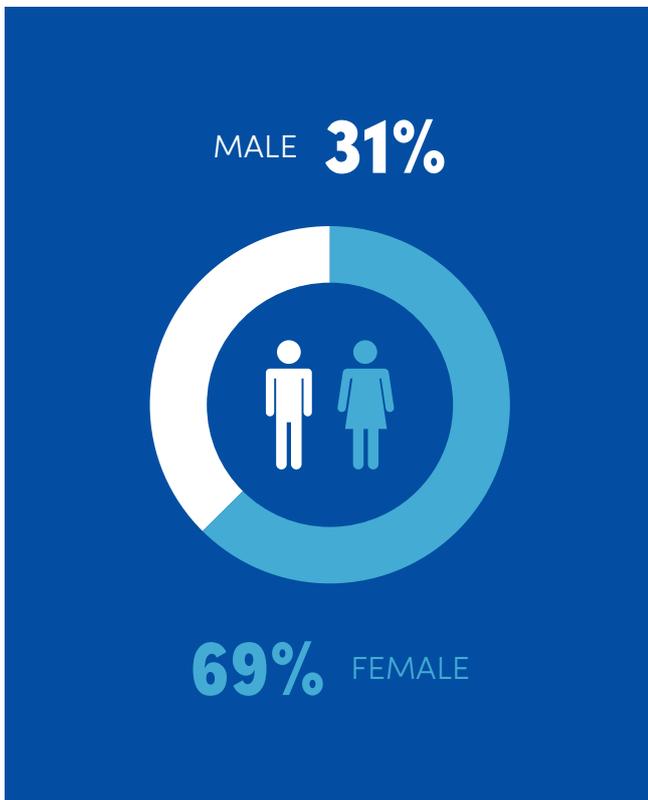
**Figure 8** - Characterisation of the teaching/research staff in terms of level of education (average over the period in question).

In CIÊNCIAS' teaching and research staff, the number of members with disability status remained roughly stable over the period in question, corresponding to around 3.2% of the total group.

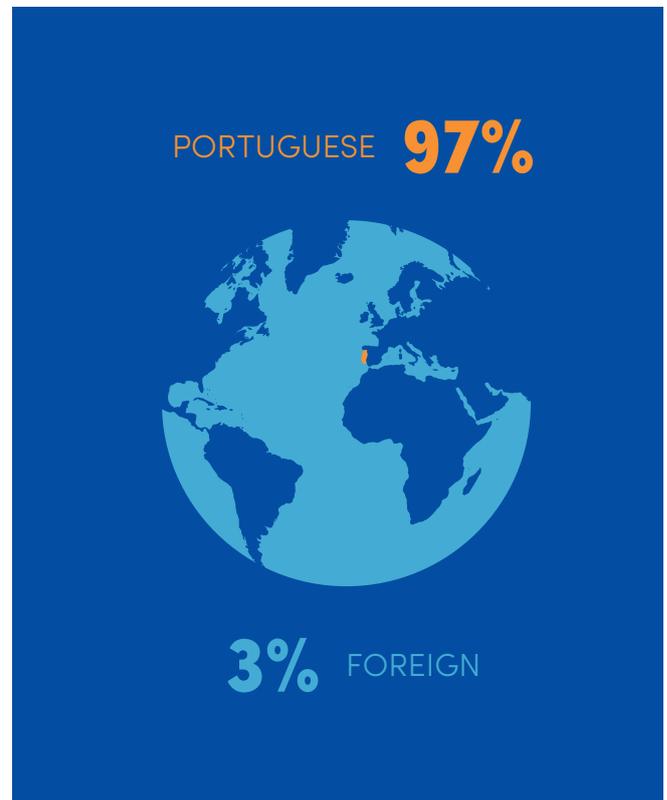
# Technical-administrative staff

The gender distribution of the technical-administrative staff has remained roughly constant over the period covered by this report, with a majority of female members (Figure 9). Although residual, there is a slight trend towards an increase in this imbalance (a drop of 1.8% in male staff from 2019 to 2020, and 0.2% from 2020 to 2021).

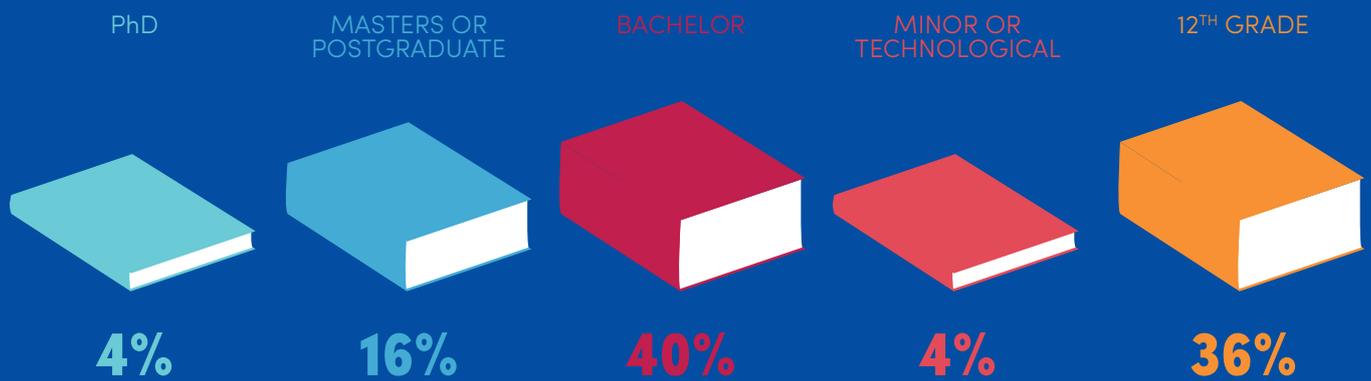
The technical-administrative staff in CIÊNCIAS are predominantly Portuguese nationals, a situation that has not changed significantly over the period in question (Figure 10). The technical-administrative staff in CIÊNCIAS who are foreign nationals come mostly from countries such as Brazil, Guinea and São Tomé and Príncipe.



**Figure 9** - Characterisation of the technical-administrative staff with regard to gender distribution (average over the period in question).



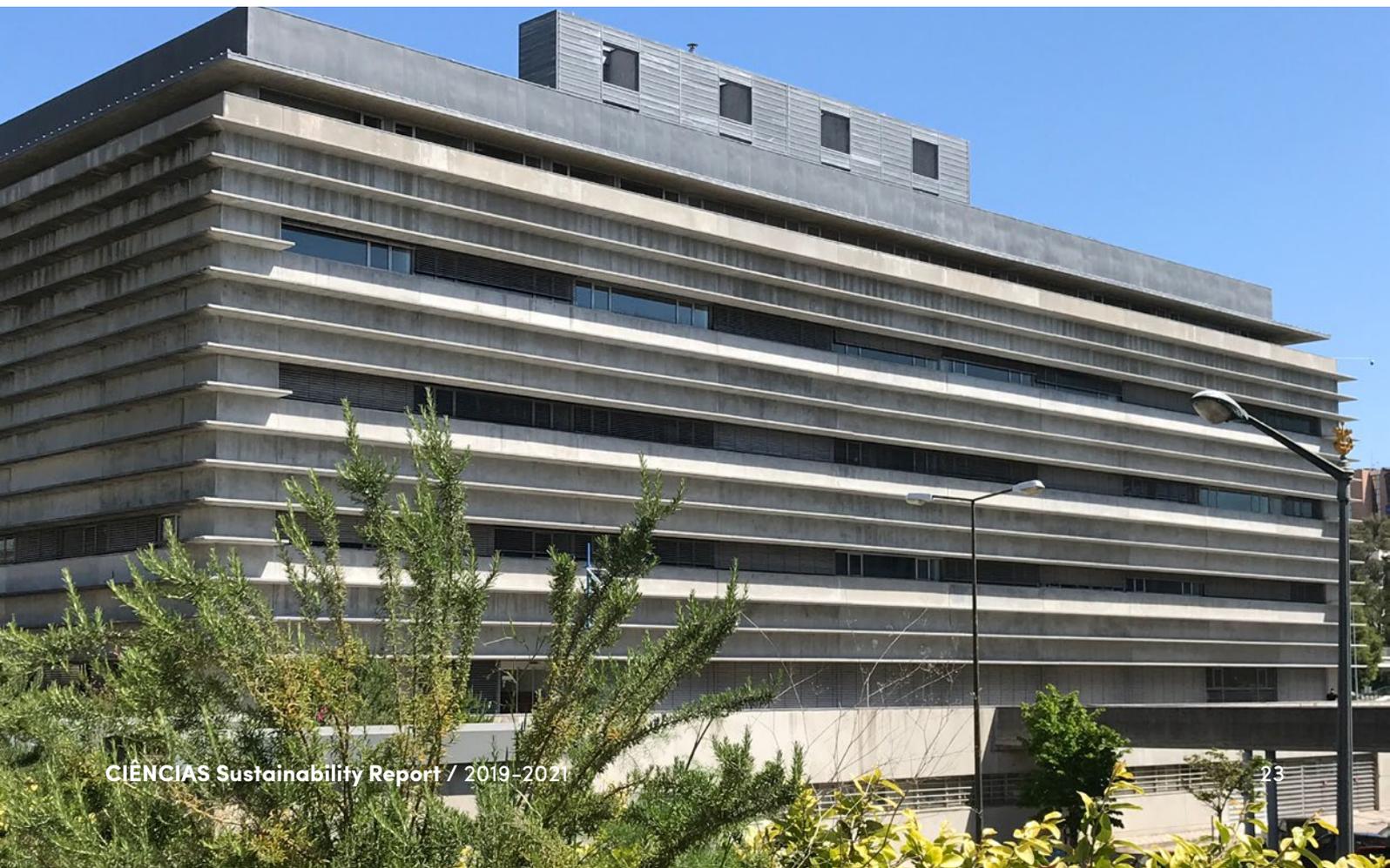
**Figure 10** - Characterisation of the technical-administrative staff in terms of nationality (average over the period in question).



**Figure 11** - Educational qualifications of CIÊNCIAS' technical-administrative staff.

The educational qualifications of CIÊNCIAS technical-administrative staff are quite diverse, most of which have a bachelor degree (Figure 11).

There was no register of non-teaching male staff with disability status over the period in question. As for women, in 2019 there were 4 employees with this status, and 3 in both 2020 and 2021.



# Management Bodies

The governance of CIÊNCIAS is exercised by a series of bodies<sup>3</sup>, almost all of which are made up exclusively of Teachers and Researchers. The exceptions are the School Board, which also includes representatives of the Technical-Administrative Staff (2) and Students (1), the Education Board, made up equally of Teachers and Students, and, of course, the External Advisory Committee, whose members do not belong to any of these large groups, although they all come from teaching or research at their home institutions. Other existing bodies are the Scientific Board, the Management Board and the Faculty Dean, and all their assistants. The gender characterisation of all the members of the Governing Bodies reveals a majority of male members, which has remained stable over the period in question, and is shown in Figure 12.

All members of the Governance Bodies are Portuguese nationals and, as would be expected, given that the vast majority of them are teachers/researchers, all of them have a PhD.

During the period in question, there were no female members of the Governance Bodies with disability status, and only one male member with this status.

The Faculty of Sciences of the University of Lisbon also has a significant number of Middle Managers responsible for the operation of the different services, all of whom are Portuguese nationals. The gender distribution of this group of managers, shown in Figure 13, reveals a significant majority of female members over the period in question.

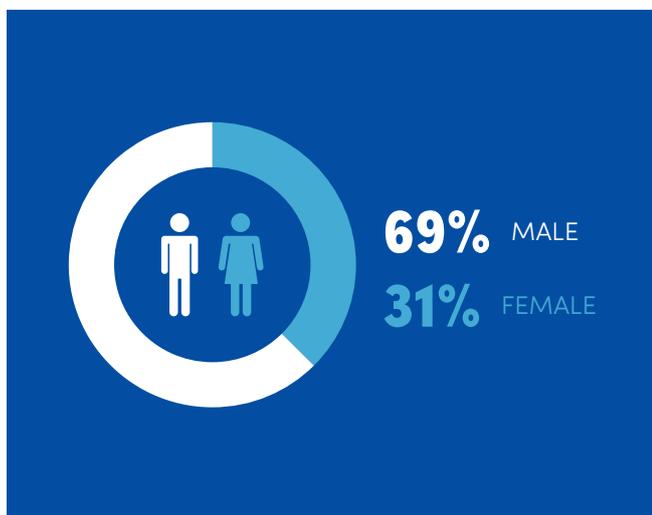


Figure 12 - Average gender distribution of the Governance Bodies over the period in question.

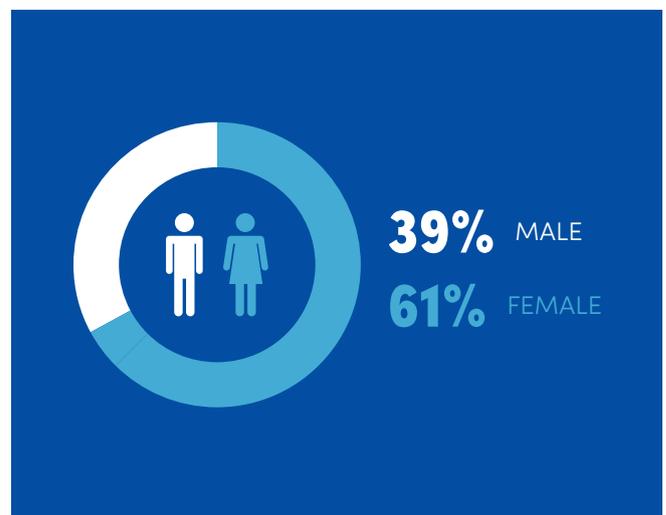


Figure 13 - Average gender distribution of Middle Managers over the period in question.

3 <https://ciencias.ulisboa.pt/en/governance-bodies>

The characteristics of the Middle Managers in terms of their educational qualifications is shown in Figure 14. This group is characterised by a very significant majority of people with undergraduate degrees, a trend that has increased slightly over the period in question.

With regard to the existence of special statuses in this group, it was noted that over the period in question, only two female members were indicated in 2019 and 2020, and just one in 2021.

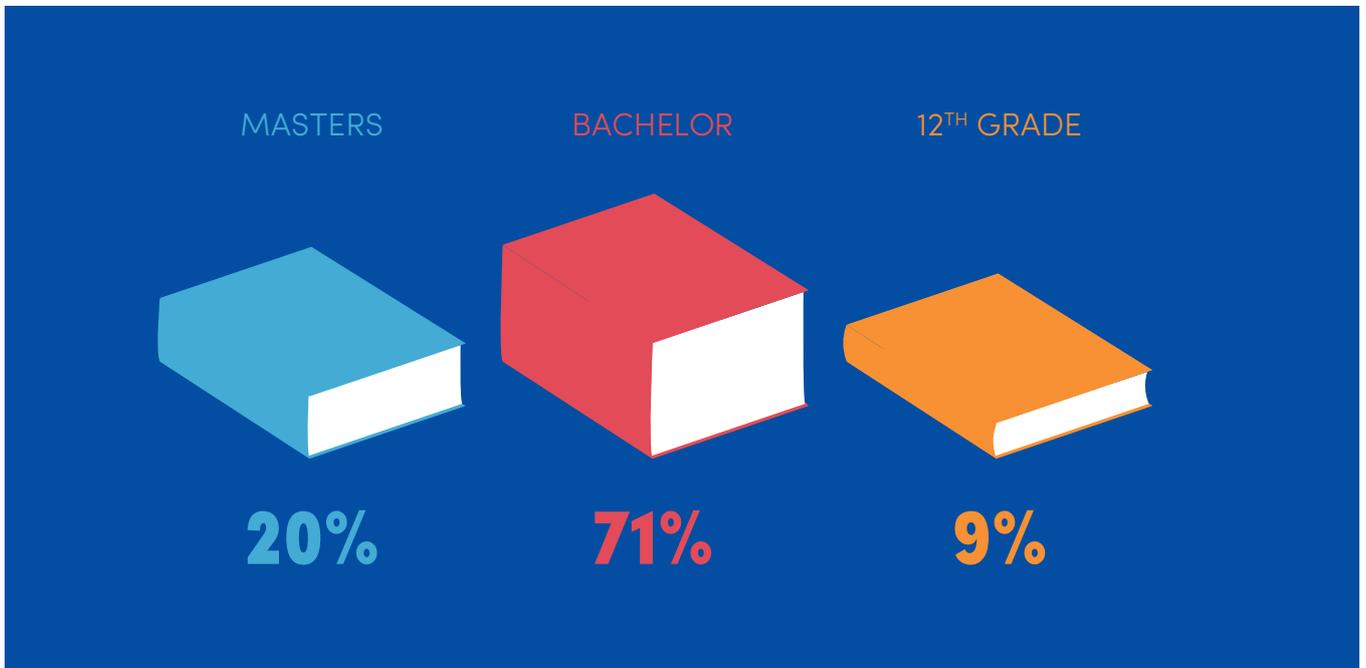


Figure 14 - Educational qualifications of CIÊNCIAS' middle managers.



# Partnerships

The characteristics of a community will not be complete without an explicit mention of its group of partners, essential parts of its position. For CIÊNCIAS, the engagement with the entire academic community and an openness to civil society are the essential basis for achieving the success of the Institution and its sustainability policy. We believe that this involvement must be founded on relationships based on communication, mutual trust and transparency, and translate into the development of partnerships that lead to strong relationships based on mutual respect and that help achieve the success and well-being of all.

CIÊNCIAS therefore values all its partners, both those considered internal, because they carry out their work within the strict scope of CIÊNCIAS' world, and those considered external, seeking to understand their needs and expectations, since they are the ones who have daily contact with the strategies implemented and who can best identify challenges and opportunities.

CIÊNCIAS is always available to listen to the contributions of its partners, through various forms of communication, to be used as an appropriate way to promote dialogue and a close relationship. In this context, we highlight the following non-exhaustive list of CIÊNCIAS' partners.



# Internal partners

## Students association

CIÊNCIAS recognises and supports the Students Association of the Faculty of Sciences of the University of Lisbon (AEFCL) as a privileged interlocutor in the management of all matters of interest to the student body, providing it, as far as possible, with the conditions for the autonomous exercise of its activities. This association, founded in 1907, was initially made up of students and teachers, so that the latter could help the students who were part of the Association, and its members, all men, were called 'The Masters'.

In 1911, the University of Lisbon was created, but the Association had already been founded previously, with an initial name that had yet to be ascertained. It took on the name of Students Association of the Faculty of Sciences of Lisbon in 1909, a name that has remained to this day.

AEFCL has moved premises several times, with the most significant changes coming after 1 September 2013, when, unfortunately, due to a fire on its premises, it had to move to the temporary premises in Building C4. In September 2015 the AEFCL moved to the permanent premises in Building C7, where it is currently located, which has allowed it to grow and improve as an Association.

AEFCL's regular activities are many and varied, including the organisation, in partnership with CIÊNCIAS, of the CIÊNCIAS' JobShop (which gains new dimensions every year), Cultural Weeks, the creation of theatre groups and sports teams, various recreational and sporting events, workshops, debates, the constant renewal of its merchandising, student representation inside and outside Ciências, not forgetting, of course, various publications.

AEFCL also provides support to a number of Students Groups associated with different scientific areas, which organise activities geared towards their specific interests and seek to contribute to the integration of new students, namely by clarifying doubts and providing tutoring/mentoring.



The centres currently active and their contact details are listed below.

Group	Connections
NQB - Chemistry and Biochemistry Students Group of the Faculty of Sciences of the University of Lisbon	 
CADI FCUL - Students Committee of the Computer Science Department	 
CCGeoespacial - Geospatial Engineering Committee	
NE2B2 - Biomedical Engineering and Biophysics Students Group	  
NEBFCUL - Biology Students Group	  
NEGFCUL - Geology Students Group	 
NEMMA - Mathematics and Applied Mathematics Students Group	 
NFEF-FCUL - Physics and Physics Engineering Students Group	  
CACG - Geophysical Sciences Students Committee	 
NEEIO - Statistics and Operational Research Students Group	 
Biology Tutoring	
OutCiências	  
NMC-FCUL - Dive Group	
Eco-Social Group	
Biology Field Committee	
CIÊNCIAS Film Club	



### **Ciências ULisboa Alumni Network**

The Faculty recognises and supports the Ciências ULisboa Alumni Network in order to strengthen the relationship between alumni and CIÊNCIAS and promote their collaboration in the pursuit of the Faculty's goals. Launched on CIÊNCIAS' Day 2019, the Ciências ULisboa Alumni Network aims to bring together CIÊNCIAS ULisboa alumni from all over the world, with the aim of deepening the Faculty's full integration into society and the world.

This network also aims to help alumni find former colleagues, friends and professors and show them what is being done in CIÊNCIAS ULisboa. The Ciências Alumni Network has a portal on the CIÊNCIAS website, where a survey is available for alumni to register and join the network, via the [link](#). That's why everyone is invited to sign up to this network, submit proposals for initiatives and create synergies.



### **Workers' association**

CIÊNCIAS recognises and supports the role of the Workers' Association (ATFCUL) as a professional and cultural organisation for the life of the Faculty, providing it, within possibilities, with the conditions for the autonomous exercise of its activities.

Under the terms of its statutes, ATFCUL's purpose continues to be the promotion of sports, culture, leisure and recreation, and over the years it has provided other services to its members, such as general medical consultations, nutrition, the delivery of medicines, the creation of canteens and bars, etc.



# External partners

## **FCiências.ID**

FCiências.ID is a private, non-profit association set up on 9 January 2017 by CIÊNCIAS and a group of entities from the business sector. Its purpose is to carry out, support, promote and foster research, development and service activities of its Members, namely in the execution of R&D activities, project management and the promotion of initiatives that create conditions or facilitate the promotion or construction of activities of high scientific, technological, engineering, innovation, dissemination, knowledge and training transfer, beyond reproach from a legal, ethical and moral point of view.

FCiências.ID's clients are its associates through their respective R&D units, as well as other SCTN entities. Of particular note are the CIÊNCIAS R&D units, which in addition to CIÊNCIAS members also include researchers from around 19 other Higher Education Institutions and National Institutes.

In addition to R&D activities, FCiências.ID is contractually responsible for the financial and administrative management of research contracts for its research units and researchers.

Research activity is guaranteed by teachers and researchers with contracts with the Associates, or by staff specially hired by FCiências.ID for the execution of specific R&D activities. Many R&D activities are carried out in an international context and benefit from national and/or international funding.

FCiências.ID currently manages more than 300 R&D contracts, and is the organisation responsible for managing around 19 research units in the fields of Mathematics, Statistics and Operational Research, Physics, Chemistry and Biochemistry, Geology and Geophysics, Space and Astronomy, Biology, Energy and the Environment, Computer Science, Education Sciences and History and Philosophy of Science.

FCiências.ID is subject to VAT, follows the Public Procurement Code and does not have public utility status.



**FCiências<sup>ID</sup>**

ASSOCIAÇÃO PARA A  
INVESTIGAÇÃO E  
DESENVOLVIMENTO  
DE CIÊNCIAS

## Rede Campus Sustentável

Since the beginning of its establishment, CIÊNCIAS has collaborated with the Sustainable Campus Network - Portugal (RCS-PT), a cooperation network between national higher education institutions that aims to promote sustainability issues in Portuguese higher education institutions and thus contribute to a more sustainable society. It was created on 27 November 2018 with the aim of encouraging the sharing of knowledge, initiatives and success stories by promoting joint actions within the Sustainable Campus theme. CIÊNCIAS is one of the 27 institutions that signed this network's letter of intent which translates into a commitment to adopt sustainability principles and practices in higher education, and declares its ambition to play a central role in the evolution towards a sustainable, free, just, supportive and tolerant society, characterised by respect for nature and the human person, by developing actions aimed at promoting ethics for sustainability, offering training for sustainability, transdisciplinarity, the dissemination of knowledge, the creation of collaborative networks and partnerships, as well as fostering technology transfer.

This network is organised into 9 thematic Working Groups, which seek the participation and collaboration of various members from different higher education institutions and promote the identification of thematic activities related to education, research and the promotion of sustainable development. CIÊNCIAS has active representatives in all the WGs, and is or has been responsible for fostering the activities developed by some of these groups, such as: Sustainable Cities and Communities, Education and Curriculum for Sustainability, Circular Economy and Waste Management and Sustainability of Food Production and Consumption.

CIÊNCIAS has actively collaborated in various events organised through the Sustainable Campus Network, namely by taking part in the organisation of webinars and contributing with papers or taking part in panels presented at the various conferences organised, among which the following stand out:



## Webinars

## Connections

Waste Management: implementation of communication circuits and strategies



Hazardous Waste



Concept and application of the circular economy in the various areas of product value chains: examples of good practices



Sustainable Cities and Communities: Examples of Good Practices in Campus-Community Interaction



Good Sustainable Mobility Practices in Higher Education Institutions



**1<sup>st</sup> Sustainable Campus Conference (CCS 2019) with the theme 'Sustainable Development: Higher Education Institutions as Agents of Change'**



- CIÊNCIAS: a Sustainable Development Living Lab

**2<sup>nd</sup> Sustainable Campus Conference 2020 (CCS 2020) with the theme 'Smart Initiatives for a Sustainable Campus'**



- Contribution of R&D projects to the dissemination of the circular economy concept on campuses and in curricula - Part I and II;
- Permaculture as a tool for a more sustainable campus. HortaFCUL case study;
- URBANL@B: A Virtual research infrastructure in urban ecology;
- Sustainability ideas competition @ CIÊNCIAS Campus - A participatory approach.

**3<sup>rd</sup> Sustainable Campus Conference 2021 (CCS 2021) with the theme 'Sustainable Campus: Challenges and Opportunities'**



- FCULresta - A mini-forest in CIÊNCIAS
- +Biodiversity@CIÊNCIAS: Mobilising CIÊNCIAS' community to promote sustainability on campus
- Integrating sustainability into the strategy of public Higher Education Institutions in Portugal
- Promoting the Sustainable Development Goals in the Sustainability Living Lab
- Sustainability@Faculty of Sciences of the University of Lisbon
- Sustainability challenges of AEFCL
- CO2EQ emissions associated with travel related to scientific activity: FCUL case study
- Chicken Tractors: An efficient and sustainable connection in closed-loop agriculture

At the last conference, it was decided to organise a day dedicated to joint forces between the various working groups, with the main aim of promoting a broad collective reflection on the future of the Sustainable Campus Network, where a dynamic and interactive programme is planned.

CIÊNCIAS ULisboa enthusiastically agreed to be a partner of the Network in holding this meeting, securing the venues and all the logistics, as well as taking part in drawing up the programme and organising activities. It is a clear example of the fact that CIÊNCIAS continues to be committed and involved in sustainability issues, and in creating key moments for sharing knowledge with its partners.

### **Lisbon City Council**

The interaction of CIÊNCIAS with the Lisbon City Council is, of course, manifold and varied. Of particular note in this context is the BioLab Lisboa initiative, which is the result of a partnership with the Lisbon City Council and FCIÊNCIAS. ID, with the aim of implementing a multidisciplinary open-concept and Innovation Ecosystem that allows citizens, educational institutions and public and private organisations to co-create new concepts for Lisbon citizens through scientific knowledge. This partnership aims to promote training, capacity-building, experimentation, prototyping, proof of concept, acceleration and value creation in the field of biotechnology.

### **Portuguese Environment Agency (APA)**

The Portuguese Environment Agency is the body responsible for implementing environmental policies in Portugal. The APA aims to contribute to a high level of environmental protection and enhancement by providing quality services to citizens, and its mission is the integrated management of environmental and sustainability policies.

The APA has monitoring, planning and evaluation, licensing and inspection competences, and is therefore the main environmental regulator in Portugal.



### **Lisboa E-Nova - Energy and Environment Agency of Lisbon**

Lisboa E-Nova is a non-profit private association. Its purpose is to promote the sustainable development of the city of Lisbon and its metropolitan area, through the improvement of energy efficiency, the use of endogenous resources and environmental management.

Lisboa E-Nova intends to be an incentive for the city's essential transformation to implement the energy transition process, capable of ensuring climate neutrality by 2030 and responding to the climate emergency.

Currently, Lisboa E-Nova integrates 21 entities in its membership, public and private, covering different areas of activity and where, since 2017, the Faculty of Sciences of the University of Lisbon has been included.

The collaboration between the two entities has been intensifying over the years, either through collaboration on common projects, namely in the area of solar energy and heat waves, or through specific activities such as the presentation of joint applications.

### **Ambiente Portugal Platform**

It's a virtual space that compiles Portuguese entities that are already examples of cooperation and competition or intend to initiate projects based on these concepts, and that work 'on the environment' or 'with the environment'. It allows the dissemination of concrete cases and also the promotion of new consortia, new associations, more synergies and more innovation.





### **UNICA**

UNICA is an institutional network of universities from the capitals of Europe. Founded in 1990, it is currently made up of 54 universities from 38 capital cities of Europe, combining over 180 thousand university staff and 2 million students.

It aims to benefit from the specific profile of its members to expand and strengthen international collaborations, engage academic leadership and facilitate networking among academic communities, in order to share their full potential, putting knowledge, research and innovation at the service of the needs of societies and future generations.



### **Active Space**

It is a company that develops and supplies electro-mechanical systems for extreme environments, particularly space applications.



### **Vitalia Portugal (Martifer Solar)**

A company in the renewable energy sector that produces and provides services in the production of renewable energy from solar, wind, water and biomass energy, also combining storage solutions.



### **Lisbon Urban Data Lab (LX Data Lab)**

The LX Data Lab involves the municipality of Lisbon, academia and the city's innovation ecosystem. It was created in response to the need to extract value from the municipal information already available, using advanced data analysis tools and the academia's innovation capacity and innovative ecosystem, to develop solutions capable of solving real problems in the city and improving the services provided to those who inhabit, work in and visit Lisbon, namely urban planning, security, mobility, and both operational and emergency management.



### **Bright Solar**

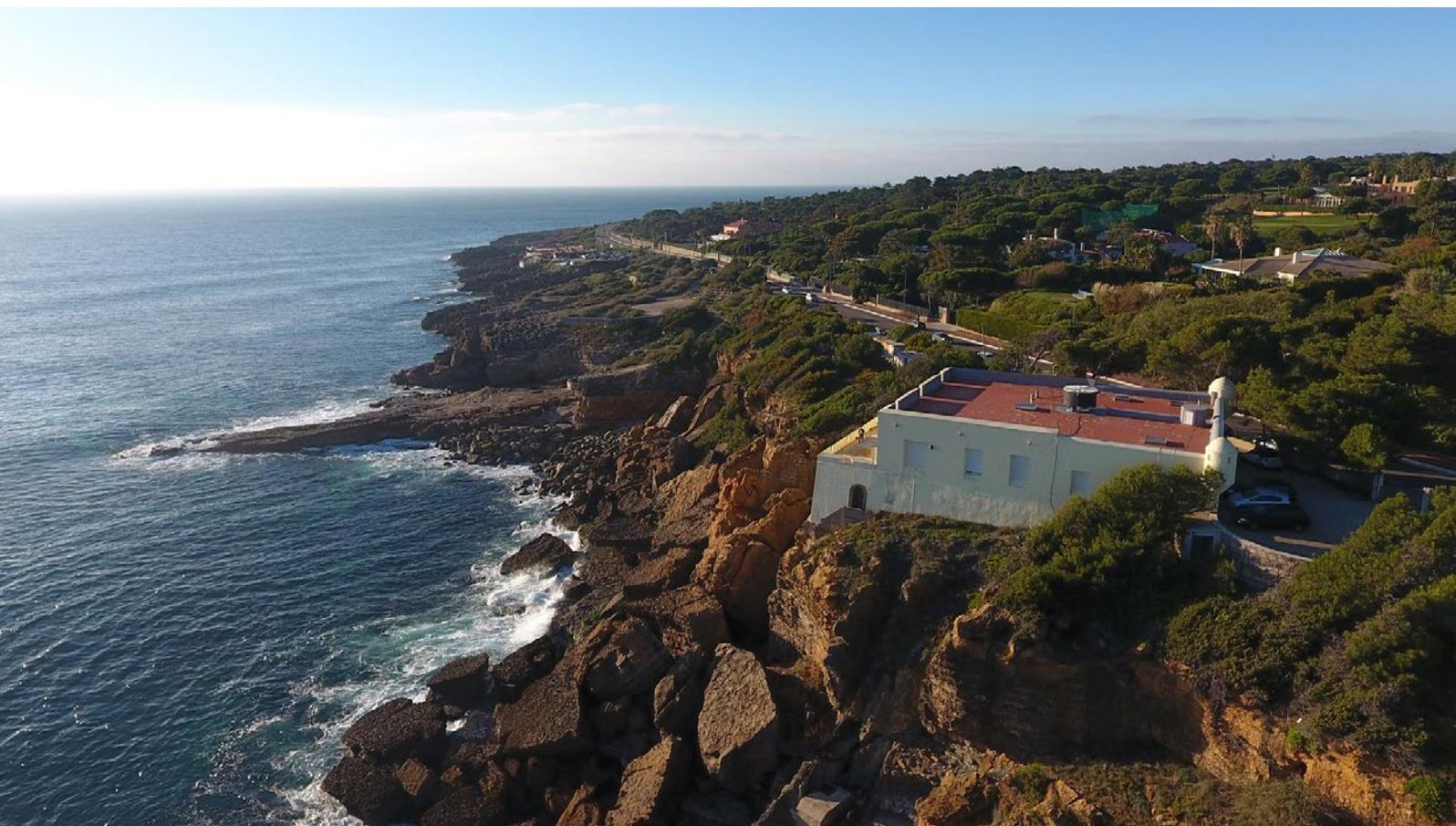
An energy services company oriented towards a comprehensive and integrated offer, regarding all aspects that influence energy consumption, one of the leading companies in the renewable energy sector in Portugal.

# Suppliers

The close relationship with the suppliers identified as essential to the normal running of CIÊNCIAS is fundamental to ensuring the continuity of services and their smooth running, since any failure in supply could severely affect the activities carried out on campus. CIÊNCIAS currently has 483 suppliers (2022 figures), which is why the principles of relations with them, based on ethics, clarity and sustainability, are fundamental. The main suppliers identified in CIÊNCIAS are mainly in the following areas: food; electricity; water and sanitation; gas; telecommunications; surveillance; maintenance; cleaning and hygiene; software; hardware; insurance, etc.

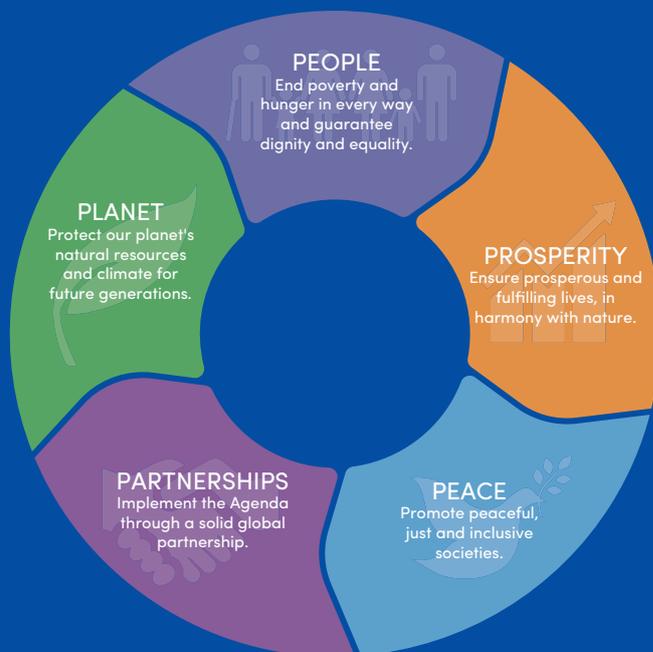
As CIÊNCIAS is an organisational unit of the University of Lisbon, all procurement procedures are governed by the Public Procurement Code (CCP).

The Assets and Procurement Department manages asset management operations and the procurement of goods and services, respecting technical and legal considerations, accounting principles, ensuring their regulation and application, and respecting the principles of responsibility and sustainability. When procuring goods and services, CIÊNCIAS favours local and national suppliers and seeks to define sustainability criteria with a focus on Council of Ministers Resolution 141/2018, which promotes a more sustainable use of resources in Public Administration by reducing the consumption of paper and plastic products.



# 04/ Sustainable CIÊNCIAS

In September 2015, UN member countries unanimously approved the document 'Transforming Our World: The 2030 Agenda for Sustainable Development', based on five lines of action: People, Planet, Prosperity, Peace and Partnerships.



This Agenda includes 17 Sustainable Development Goals (SDG) which are the result of a work of governments and citizens around the world to create a new model of global partnerships to end poverty, promote prosperity and well-being for all, protect the environment and fight climate change.

Our planet faces enormous economic, social and environmental challenges. To fight them, the SDG define global priorities and aspirations for 2030, and seek to mobilise global efforts around a common set of goals and targets, representing an unprecedented opportunity to end extreme poverty, create a decent life and opportunities for all, within the limits of the planet, and put the world on a sustainable path. Governments around the world have already agreed to these targets. Now is the time to act, but success depends on the action and collaboration of all players.

Covering a broad spectrum of relevant sustainable development topics such as poverty, health, education, climate change and environmental degradation of the environment, the SDG can help align institutional strategies with global priorities. In particular, higher education institutions can

use the SDG as a comprehensive conceptual framework to guide and communicate their governance strategy, and define their objectives and activity plan in terms of education, research and knowledge transfer. CIÊNCIAS is aligned with the UN 2030 Agenda and its 17 SDG and thus seeks to train aware, receptive and influential leaders when it comes to issues related to sustainability, aiming to be a centre for fostering knowledge, innovation and the knowledge transfer to society. In recent years, CIÊNCIAS has been defining concrete objectives to promote the SDG in the various areas in which they operate, namely by integrating sustainability content into curricular units, encouraging SDG-orientated research and promoting and reflecting on SDG-related issues among the academic community and the surrounding population.

In addition to its main campus located in Campo Grande, CIÊNCIAS has an estate located in the Serra de Grândola, covering around 221 ha. The Herdade da Ribeira Abaixo (HRA) is surrounded by cork oak forests, is crossed by several riparian galleries and provides important ecosystem services, including carbon sequestration which, taking into account the total cork oak forest area of the Herdade, can be estimated at 180 tonnes of carbon equivalent per year. HRA is managed with the aim of improving biodiversity, providing services to maintain the life cycle, habitat and genetic heritage, as well as carrying out scientific activities, quantified by carrying out projects, PhD and Masters Theses, and lectures.

At the same time, and in the context of the Campo Grande Campus, CIÊNCIAS seeks to minimise the environmental impacts and the promotion of financial sustainability that its

activity requires, through the implementation of a set of practices adopted in its internal management, in order to guarantee the sustainable operation and development of the institution considering the five dimensions of action of the SDG (People, Planet, Prosperity, Peace and Partnerships). In this context, practices have been adopted aimed at increasing energy and water use efficiency, proper waste management, controlling greenhouse gas emissions, diversifying green spaces as a way of promoting urban biodiversity, or promoting social cohesion and solidarity through the CIÊNCIAS Solidária association.

CIÊNCIAS has a greater predominance and capacity to influence 10 SDG: 2, 4, 7, 9, 11, 12, 13, 14, 15 and 17 (Figure 15).



## SUSTAINABLE DEVELOPMENT GOALS



Figure 15 - Predominant SDG in CIÊNCIAS

CIÊNCIAS, due to its eminently interdisciplinary nature, hosts numerous activities related to the Sustainable Development Goals. Although it would be desirable to include all of them in this first edition of a sustainability report, it would be impossible to do so in good time. It was therefore decided to present a set of highlights in the various areas of activity in CIÊNCIAS, which we naturally hope to be able to develop in following editions. Despite the close relationship between the various categories used to systematise this set of highlights, it was decided to group them into four categories: i) Education; ii) Research iii) Indicators and iv) Sustainability Living Lab.

## 1. Education

CIÊNCIAS ULisboa has a universe of opportunities to offer, beyond scientific and technological education. It offers programmes, subjects and activities in the area of sustainability and promotes various actions in this field, in a clear commitment to the UN Sustainable Development Goals in all five dimensions. CIÊNCIAS aims to integrate the theme of sustainability into education and learning at various levels, and thus seeks to strengthen the skills of teachers and raise the awareness of the whole community, having even started collaborations with organisations that promote social innovation.

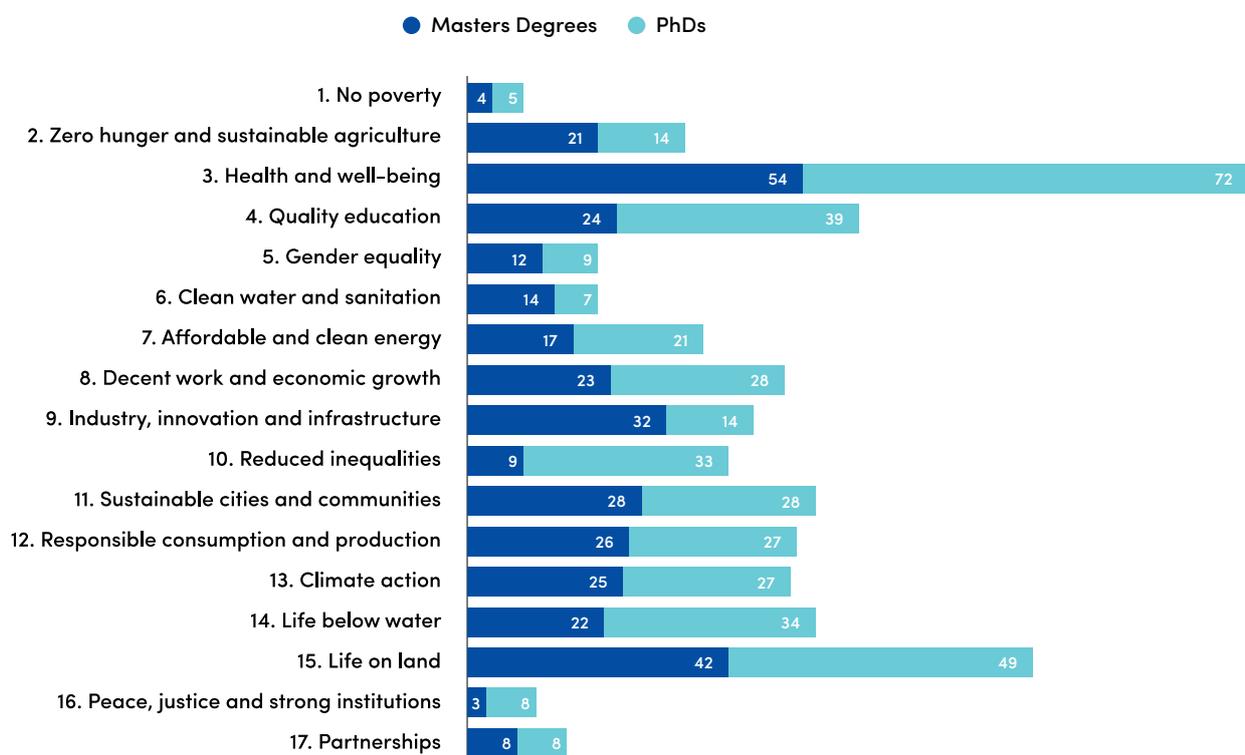


In addition to the aforementioned specific curriculum units offer, and close to the end of the period to which this report refers, a process of classifying all the Curricular Units offered by CIÊNCIAS (maximum of 3 SDG per UC) was initiated. The aim is to implement a classification system that aims to assess the contribution of CIÊNCIAS to achieving the targets set out in the SDG through the curricular units offered to students.

The intention is to make the information obtained from this survey available online soon. In the future, more promotion actions are planned on the theme of sustainability by integrating more content into curricular units, by holding campaigns and events on the subject and by strengthening multidisciplinary and partnerships with other schools and organisations.

## 2<sup>nd</sup> and 3<sup>rd</sup> Cycle Education

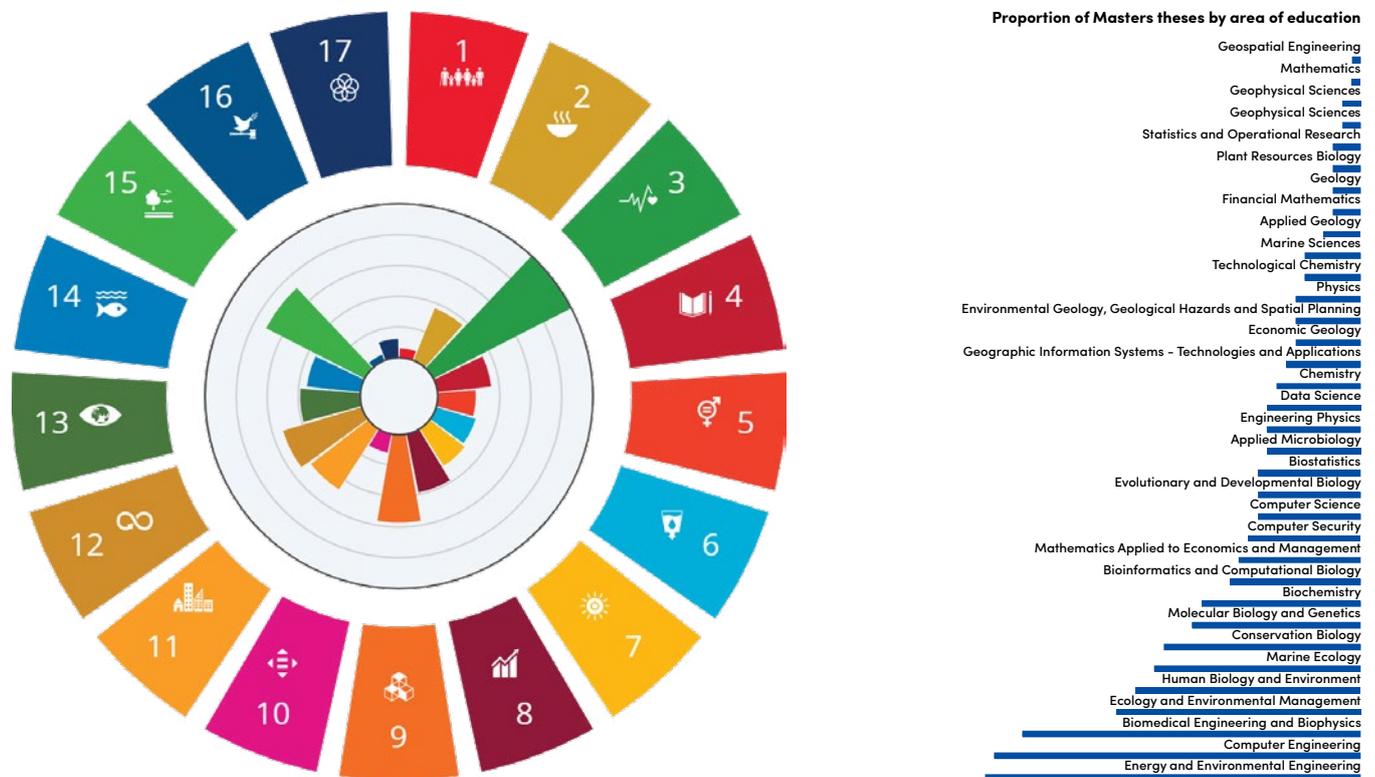
Bearing in mind the importance of postgraduate education, a classification system was created in 2021 to assess the contribution of CIÊNCIAS to achieving the targets set out in the SDG through Masters Theses and PhD Theses. For this, a survey was drawn up to classify the dissertations and theses defended over the period covered by this report (maximum of 3 SDG per dissertation). This survey was addressed to the supervisors of the 966 dissertations and theses, which obtained a significant response rate (65%), the results of which are systematised in Figure 18.



**Figure 18** - Contribution of Masters theses and PhD theses in CIÊNCIAS to the SDG for the 2019 to 2021 period.

# Masters Theses

In the 2019–21 period, information was collected from 537 theses regarding contributions to the SDG, and the results are systematised in Figure 19, which shows the distribution of Masters theses by SDG on the left, and on the right, the number of SDG addressed by the set of theses by area of knowledge.



**Figure 19** – Results obtained in the survey on the classification of Masters theses by SDG (maximum of 3 SDG per dissertation), for the 2019–2021 period.

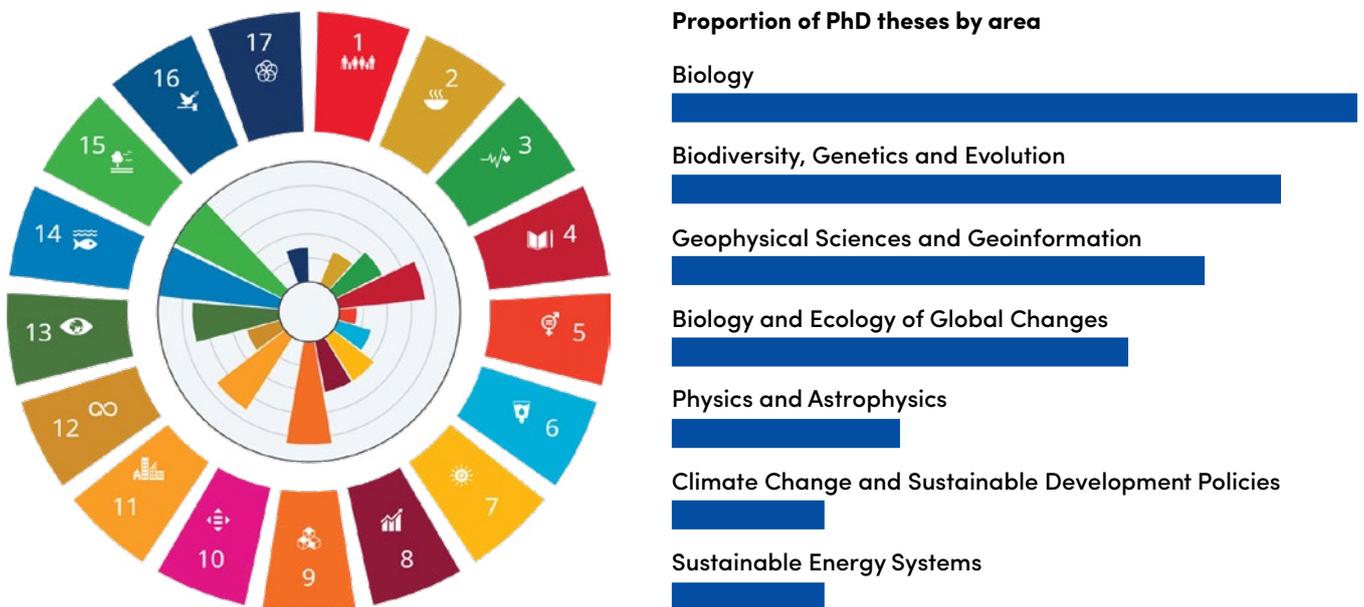
The main conclusions of this study are that CIÊNCIAS Masters theses contribute to all the SDG, with a particular focus on SDG 3 – Good health, SDG 15 – Life on land, SDG 9 – Industry and innovation, and SDG 11 – Sustainable cities and communities. These SDG represent the dimensions of People, Planet and Prosperity respectively.





# PhD Theses

Applying the same methodology to PhD Theses defended over the period covered by this report, the 88 obtained answers led to the set of results in Figure 20, which shows the distribution of PhD theses by SDG on the left, and the number of SDG addressed by the set of theses by area of knowledge on the right.



**Figure 20** - Results obtained in the survey on the classification of PhD Theses by SDG (maximum of 3 SDG per dissertation), for the 2019-2021 period.

The main conclusions of this study are that PhD Theses cover all 17 SDG, with a special contribution to SDG 4 - Quality Education, SDG 15 - Life on Land, SDG 14 - Life below Water, SDG 9 - Industry, Innovation and Infrastructure, SDG 13 - Climate Action and SDG 11 - Sustainable Cities and Communities.

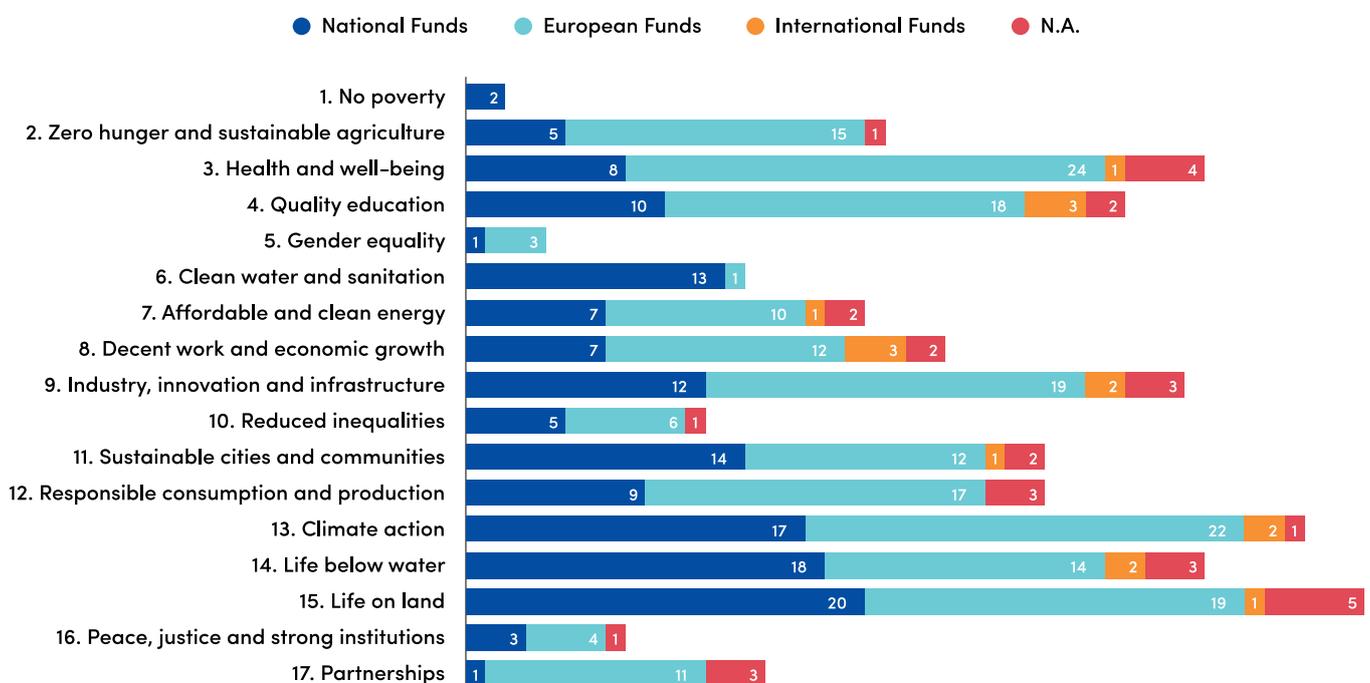
## 2. Research

The research architecture at the Faculty of Science is complex, both in terms of the relationship between CIÊNCIAS' units and departments and the involvement of numerous other faculties and research institutes. Research is organised into research units, with different names: centres, laboratories and institutes. These units bring together researchers from various departments of CIÊNCIAS and also include many researchers (more than 25%) from other Portuguese and foreign universities. Several researchers are also integrated into R&D units associated with other faculties and institutions, although in most cases they carry out their research in CIÊNCIAS' facilities.

CIÊNCIAS R&D units work in a variety of thematic areas and some are interdisciplinary in nature.

However, they can be grouped by the major scientific areas of CIÊNCIAS, mentioned in Chapter 03: Welcome to CIÊNCIAS.

In a similar way to what was previously presented in relation to Masters Theses and PhD Theses, a ranking survey was also sent to the community with the aim of assessing the contribution of active research projects to the SDG in the 2019-2021 period, with a maximum of 3 SDG per project also being imposed. This survey was addressed to the researchers responsible for the projects, and there was also a very significant response rate (91% of the 449 projects carried out over this period). The results are shown in Figure 21.



**Figure 21A** - Results obtained in the survey on the classification of active research projects, by SDG, for the 2019-2021 period. Distribution of the number of projects by SDG, divided by funding sources



**Figura 21B** - Results obtained in the survey on the classification of active research projects, by SDG (maximum of 3 SDG per project), for the 2019-2021 period.



The main conclusions of this study are that CIÊNCIAS' projects contribute to all the SDG, with the SDG relating to the 'Planet' dimension standing out the most, namely SDG 15 - Life on land, SDG 13 - Climate action and SDG 14 - Life below water. In the 'People' dimension, the contributions are mainly to SDG 3 - Health and Well-being and SDG 4 - Quality education. In the 'Prosperity' dimension, SDG 9 - Industry, innovation and infrastructure stands out.

The classification system implemented in 2021 aims to assess the contribution of CIÊNCIAS to achieving the targets defined in the SDG, at the level of Curricular Units,

Masters theses and PhD theses, research projects and scientific publications, although it has not yet been possible to implement the latter. The aim is for the SDG classification system to be carried out routinely and autonomously with information being filled in by course coordinators, authors of theses, dissertations and scientific publications, and researchers responsible for projects. The aim of this self-evaluation is not only to keep this information permanently up to date, but also, and certainly more importantly, to raise awareness in the whole community of the SDG and their impact on the UN 2030 Agenda.

# 3. Performance indicators

## Efficient use of energy and drinking water

Since 2015, CIÊNCIAS has embarked on what was intended to be a journey of continuous improvement with regard to the use of energy and drinking water sources, with the aim of improving performance in terms of the use of this type of resources and also, consequently, reducing the corresponding operating costs. Since this process began in 2015, we will use as a reference the data on the use of energy sources and drinking water in 2014, which is presented below.

Reference year	2014
Electricity	6 118 MWh
Natural Gas <sup>4</sup>	1 267 MWh
Drinking Water <sup>5</sup>	49 118 m <sup>3</sup>

This has been done by investing as much as possible each year, which are difficult to ascertain in full, mainly because of the nature of the measures taken, and it is likely that this effort will be substantially increased in the coming years. The impacts of this set of measures on the use of energy sources and drinking water will be discussed along with the presentation of the respective indicators, despite the fact that the impact of the Covid-19 pandemic has made it very difficult to analyse these results, both due to the direct action of the consecutive lockdowns to which the community has been subjected since March 2020, and even due to the changes in habits that it has introduced, in particular, when it comes to remote working. In this regard, it should be remembered that the wide majority of CIÊNCIAS employees, its teachers and researchers, are exempt from working hours, and it is indisputable that their pattern of using the Faculty's facilities has changed profoundly in the wake of the pandemic.

<sup>4</sup> Only on the Campo Grande Campus.

<sup>5</sup> In 2015 the volume of water used increased substantially (61,416 m<sup>3</sup>) due to a significant increase in leaks in underground pipes.



We highlight the following set of implemented measures:

## ENERGY

- Gradual replacement of artificial lighting sources with LED technology - this option for a gradual transition was justified not only by the fact that resources are limited, but also by the awareness that it is unreasonable to replace recently installed equipment, since its production was associated with a considerable amount of energy. It was therefore decided to start a policy of exclusively purchasing LED technology from 2015 onwards, using this technology whenever it became necessary to replace end-of-life material.
- Gradual replacement of inefficient, end-of-life air conditioning equipment with new high-efficiency equipment - following the same principles set out in the previous paragraph.
- Compensation of the power factor in some buildings - as high use of reactive power was found in some buildings, the corresponding compensation was made by installing capacitor banks.
- Gradual replacement of window frames and installation of external blinds on the south façades of buildings - several campus buildings, namely C1 and C2, were found to have particularly unsuitable indoor comfort conditions, particularly on the south-facing façades during the summer. Hence we started a gradual replacement of the existing window frames with thermal cut frames, with double glazing and swing-out windows, complemented by external blinds. On the floors that were renovated, there were very significant gains in indoor comfort conditions, including noise levels, without the need to install any type of air conditioning.

- Performance of tests of passive air conditioning solutions in buildings - during the period covered by this report, as part of a research project, work began on the design of a passive air conditioning system for a building (C4), with a view to converting it into an NZEB, taking advantage of the fact that this building has photovoltaic panels installed on its roof.
- Progressive reduction in the set-point of gas boilers for heating water in heating systems (C8) - as the temperature of the water that feeds the fan coils that heat building C8 was considered excessive, the set-point of the respective boiler was reduced slowly and progressively. The new temperature was adjusted taking into account the feedback received from users who were deliberately not informed of the process underway to avoid induced reactions.



## DRINKING WATER

- Replacement of old, buried water pipes with new ones on the surface (or very close to the surface) - CIÊNCIAS had a significant number of buried water pipes, sometimes at three or more metres deep, whose leaks were difficult to detect and even more difficult to repair. After installing individual meters in each building and a meter for all the irrigation systems, it was possible to determine whether there were any significant leaks in the distribution pipework system within the campus. In this context, it was decided to progressively install new pipelines, preferably on the surface, prioritising the replacement of the sections responsible for the greatest losses. This process is already well advanced at the end of the period in question for this report, and is expected to be finalised in 2022.

- Progressive replacement of taps in bathroom sinks with sensor taps.
- Progressive decrease in water distribution pressure within the campus - the general campus shut-off valve and the building isolation valves were slowly and progressively closed in order to adjust the water distribution pressure to the various buildings, taking into account the feedback received from users who were deliberately not informed of the ongoing process in order to avoid induced reactions.
- Rationalisation of irrigation - by reducing irrigation times in the campus green spaces, both in automated and manual systems.

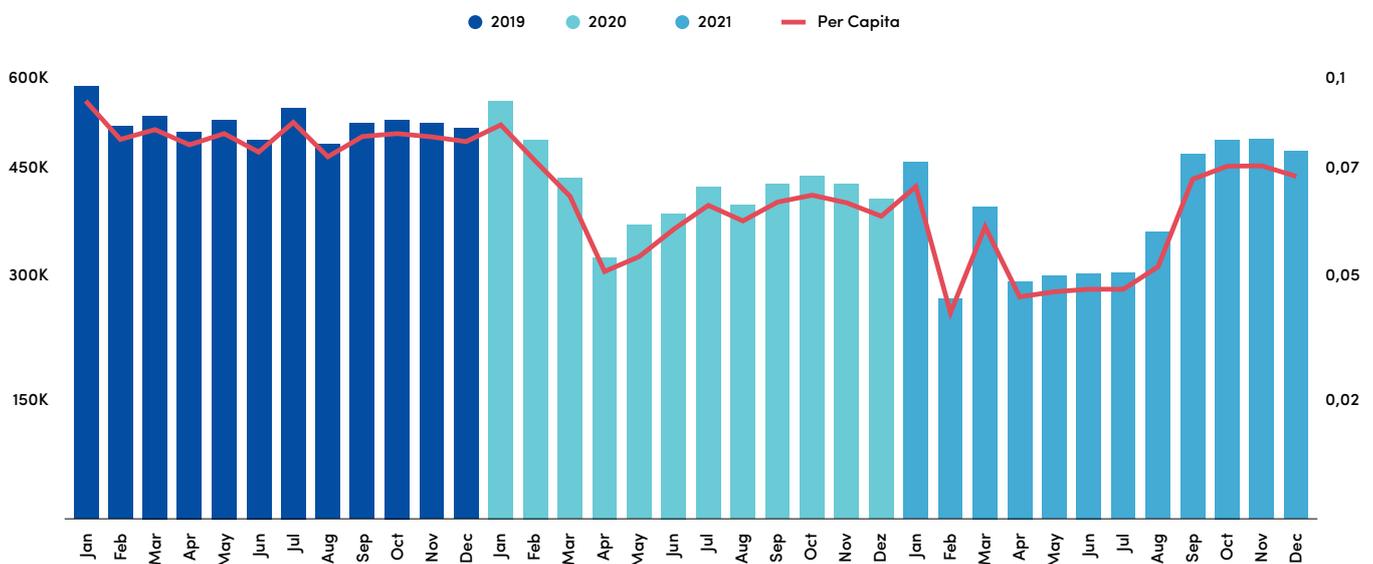


Figure 22 - Monthly use of electricity (total in MWh on the left axis and per capita on the right axis) for the period in question

## Energy use

Figure 22 shows the monthly evolution of electricity use, overall (in MWh on the left axis) and per capita (on the right axis), for the period in question.

The data for 2019 show a relatively constant use of electricity throughout the year. It should be emphasised that, contrary to what would be expected, this use does not drop significantly in August, nor in the school breaks, which seems to demonstrate the very important role of research activity in the use of electricity. The decrease in use associated with the start of the pandemic from March 2020 is notable, but gradually increased in the following months, due to the research activity that remained in operation, complying with all the restrictions imposed in relation to the COVID-19 pandemic. At the beginning of 2021, there was a further decrease in consumption associated with the 2nd wave of the pandemic, despite the existence of two months with consumption peaks, related to counting adjustments. In September 2021, there was a sharp increase in electricity consumption, due to the return of face-to-face academic activities. However, the values verified do not reach those of the same period in 2019, the pre-pandemic period.

The annual use of electricity for the period covered by this report, both overall and per capita, is shown in the following table:

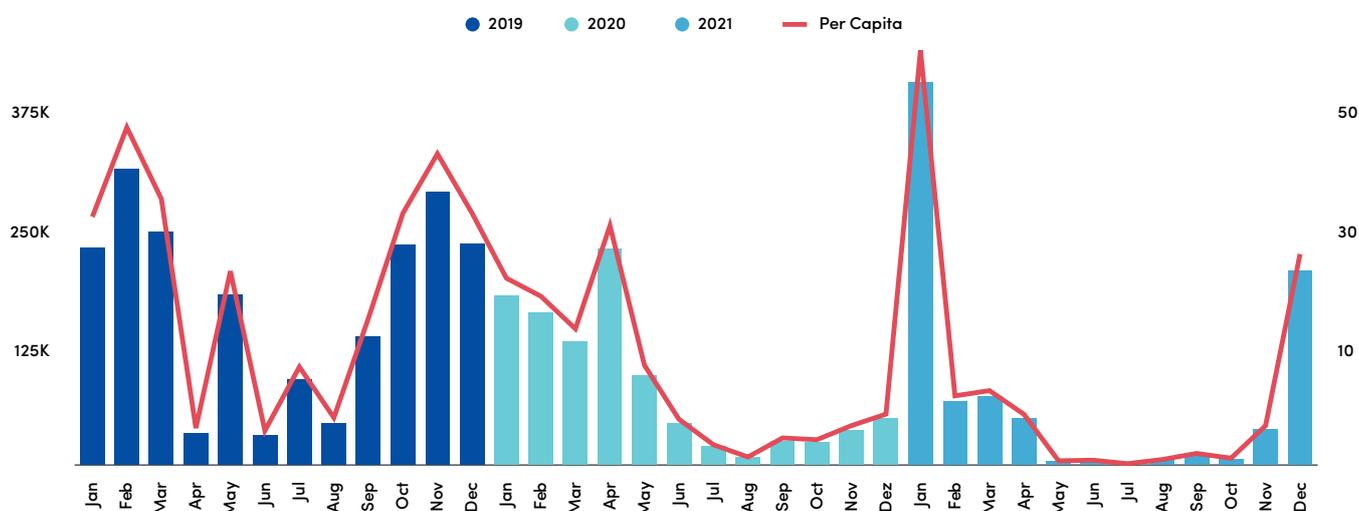
### Changes of annual electricity use for the period in question

	<b>Annual / MWh</b>	<b>Annual per capita / kWh person year</b>
<b>2019</b>	6 215	992
<b>2020</b>	4 946	765
<b>2021</b>	4 504	683



## Use of Gas

Figure 23 shows the monthly evolution of use from burning natural gas, overall (in MWh, on the left axis) and per capita (on the right axis), for the period in question.



**Figure 23** - Monthly use of energy from natural gas (total in MWh on the left axis and per capita on the right axis) for the period in question

The annual use of energy from burning natural gas for the period covered by this report, overall and per capita, is shown in the following table.

### Changes in the annual use of energy from burning natural gas for the period in question

	Annual / MWh	Annual per capita / kWh person year
<b>2019</b>	2 053	328
<b>2020</b>	997	154
<b>2021</b>	868	132

An analysis of Figure 23 shows that, contrary to the case of electricity, there is a marked seasonality in the case of natural gas, which is perfectly explainable by the fact that the use of this resource is predominantly for existing boilers for water heating for air-conditioning buildings during the cold seasons. Also for this reason, a very marked effect associated with the pandemic can be observed, since the heating has been switched off in most buildings, and there has also been a reduction associated with the decrease in the number of meals cooked, which represents a fraction of the use of natural gas.

The data obtained for the period in question, compared to the reference value (2014), show that in the first year (2019) there was no gain, and it is even noticeable that there was an increase in the use of gas. In the following years, possibly due to the pandemic situation, there was a sharp drop in natural gas consumption. As already mentioned, for a long period of time, the air conditioning systems in some buildings associated with this type of resource have been switched off or at very low levels of consumption.

There was a noticeable drop in natural gas consumption from April 2020, associated with the onset of the COVID-19 pandemic, which continued more or less until the end of 2021, although there were still two peaks in consumption, at the beginning and end of 2021, related to meter adjustments.

## Use of fuel

Although this consumption is not relevant in the overall picture of energy use in CIÊNCIAS, Figure 24 shows the change of use of fuel by service vehicles during the period in question. The effect of the pandemic can be seen in the decrease in fuel consumption from 2019 to 2020, which remained similar in 2021, with a decrease in consumption of around half of what was usual before the pandemic.

Despite the fact that in 2020 the vast majority of CIÊNCIAS ULisboa employees worked remotely, the facilities on campus maintained some activity and the Technical Services employees were the ones who remained on the ground to ensure the maintenance of the spaces. Since this service unit makes the most use of the CIÊNCIAS ULisboa service vehicles, the fuel consumption figures, although greatly reduced, did not reach zero, because there were necessary journeys.

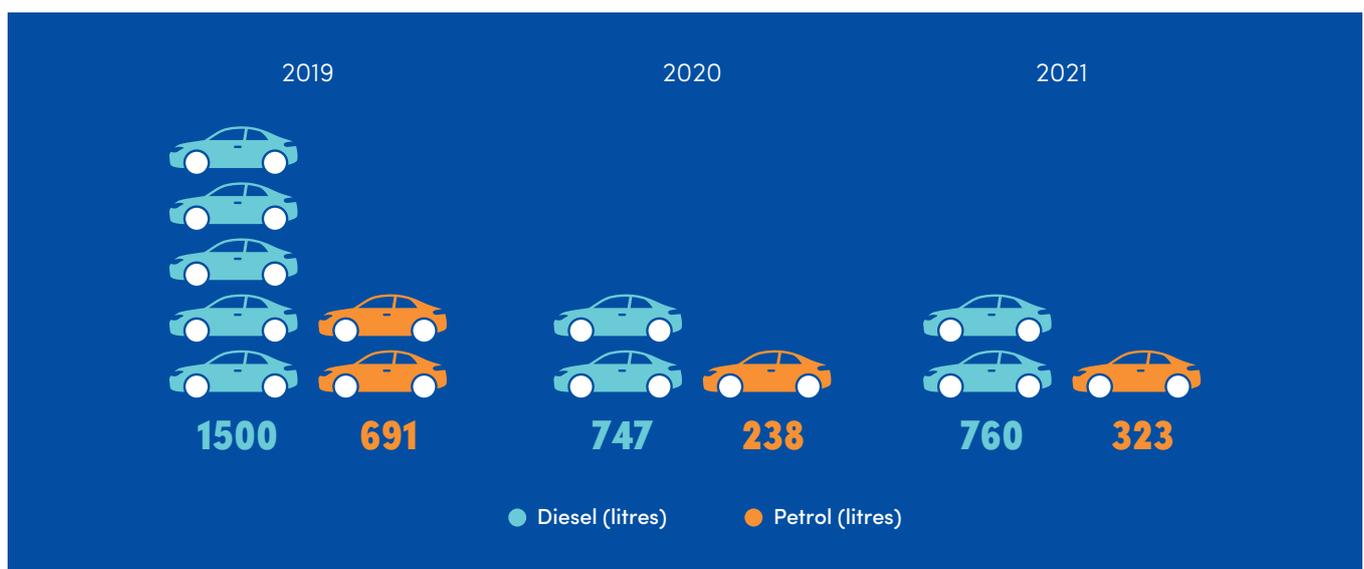


Figure 24 - Changes in the use of fuel by service vehicles (total in litres) for the period in question

## Use of drinking water

Figure 25 shows the monthly change in the use of drinking water<sup>6</sup>, global overall (measured in m<sup>3</sup> on the left axis) and per capita (right axis), for the period in question.

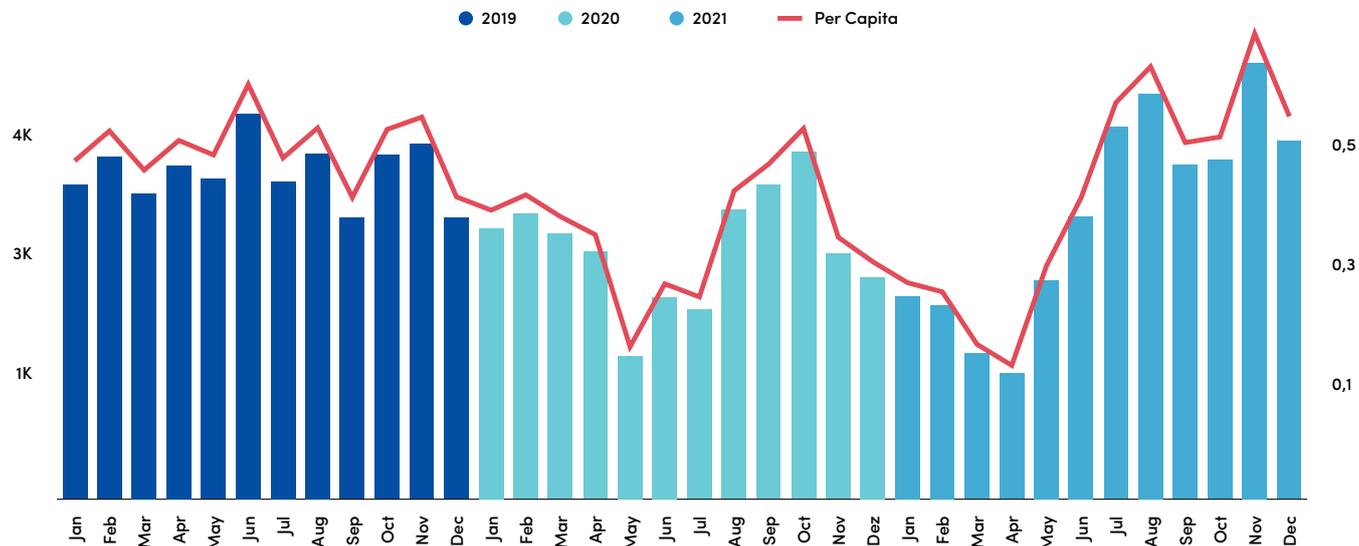


Figure 25 - Changes in the use of drinking water (total in m<sup>3</sup> on the left axis, and per capita on the right axis) for the period in question

The annual use of drinking water for the period covered by this report, both overall and per capita, is shown in the table below.

### Changes in the annual use of drinking water for the period in question

	Annual / m <sup>3</sup>	Annual per capita / m <sup>3</sup> per person year
<b>2019</b>	41 073	6,55
<b>2020</b>	31 603	4,89
<b>2021</b>	35 715	5,41

An analysis of Figure 25 shows that, as with electricity, there is no great seasonality in the use of drinking water, probably for the same reason. Comparing the 2019 figure with the reference value, it can be concluded that significant gains were obtained in this area (-15%), as would be expected given the great progress made in replacing broken pipes. In fact, it is even expected that the completion of this process in 2022 will lead to an even more significant reduction.

6. The data refers to the water supply at the Campo Grande Campus and at the Lisbon Astronomical Observatory building.

As far as the effects of the pandemic are concerned, it is once again noticeable that drinking water consumption has also decreased since March 2020, but during the summer months there is a further increase in consumption, particularly for irrigation, since the green spaces in CIÊNCIAS, which naturally have not suffered any impact from the pandemic, require regular irrigation.

Associated with the 2nd wave of the pandemic, at the beginning of 2021, there is again a decrease in drinking water consumption, in contrast to what happens from May 2021 until the end of the year, when the hottest months begin and when Portugal, due to the combination of high temperatures and low rainfall, has experienced a period of extreme or severe drought in practically the entire territory.



## Electricity production – Photovoltaic Mini-generation Plant

In 2010, together with the University of Lisbon, Galp Energia developed the 'Sustainable Campus - Green University' project, which sought to take advantage of the resources and means already existing on the premises of the University of Lisbon to install photovoltaic panels. At the time, this was the largest decentralised energy production project in the city of Lisbon and in the national academic world. In addition to promoting the implementation of renewable energy sources, it encouraged the development of applied scientific research projects on campus. The entire investment was made by Galp Energia, with the University of Lisbon providing the space available in its schools. The operating model applied, mini-generation, defined that all the energy produced would be injected into the electricity grid, with only part of the revenue from its commercialisation reverting to the University of Lisbon, for the implementation of energy efficiency measures identified in the audits carried out on the Faculty of

Sciences, Faculty of Psychology, Institute of Education and Canteen One (Old University Canteen) buildings. It therefore became important to unite the business world with the academia, with a view to greater development and innovation in the area of sustainability.

CIÊNCIAS' photovoltaic plant was finally installed in 2013, on the roof of buildings C1, C2, C4 and next to building C7, with 1,788 photovoltaic modules, corresponding to a total of 275 kWp installed.

Figure 26 shows the production of electricity from the photovoltaic plant installed on CIÊNCIAS Campus for the period covered by this report. The average annual amount of electricity generated and injected into the grid is around 500 MWh, corresponding to around 10% of the electricity used locally.

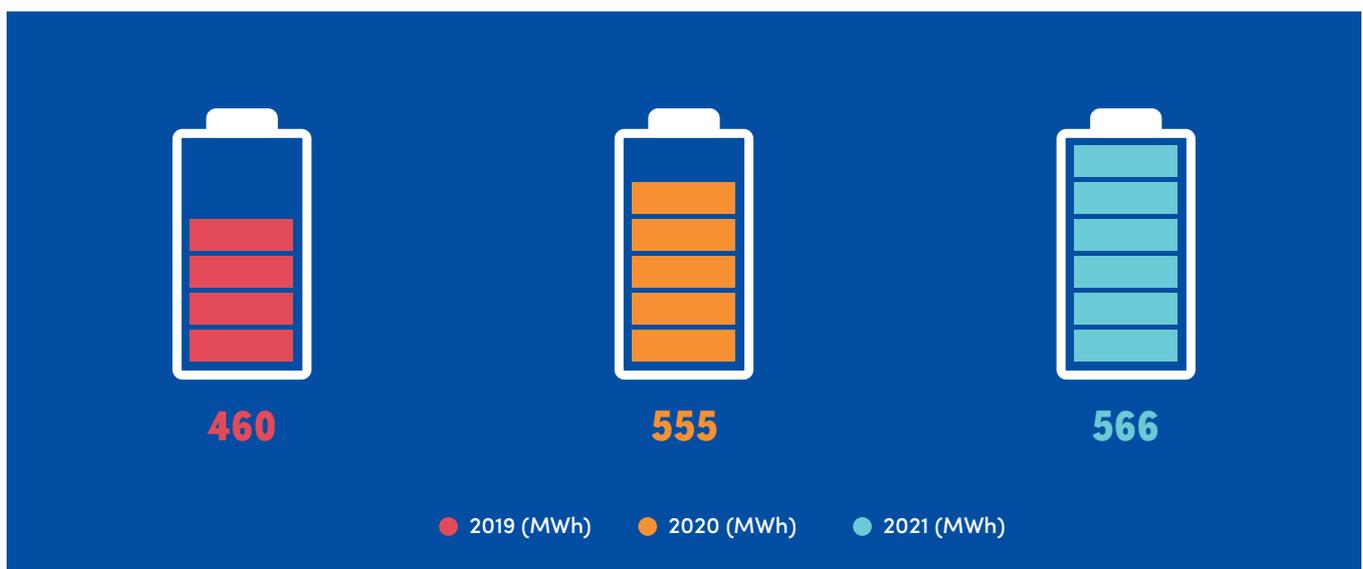


Figure 26 - Electricity produced by the photovoltaic plant installed on CIÊNCIAS Campus (total in MWh) for the period in question

## Waste Management

As a major producer of waste classified as Municipal Solid Waste (MSW), CIÊNCIAS produces around 250 tonnes of undifferentiated waste and 130 tonnes of recyclable waste every year. Per capita, this corresponds annually to approximately 40 kg of undifferentiated waste, 5 kg of paper, 3 kg of glass, 2 kg of packaging and 8 kg of organic waste, integrated into the CML collection circuits.

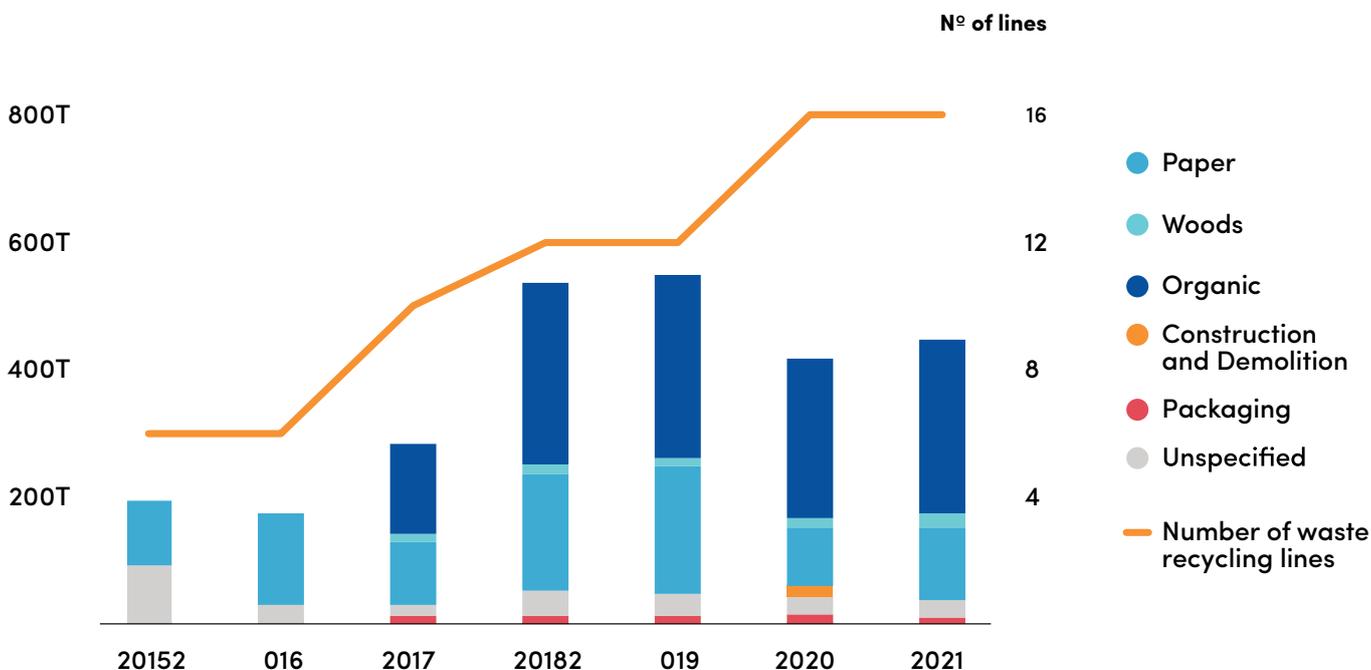


Figure 27 - Annual production of recyclable waste and respective types of waste sent to a licensed operator.

CIÊNCIAS has been making an effort to recycle its recoverable waste, increasing and diversifying internal recovery circuits by establishing protocols with licensed operators or, in the case of organic waste, by developing composting (garden waste) and vermicomposting (food waste) processes.

Figure 27 shows the evolution of the production of recyclable waste channelled through dedicated circuits, by type of waste, as well as the investment made by CIÊNCIAS in increasing the number of recycling lines from 6 lines in 2015 to 16 in 2020.

In general terms, it can be seen that the amount of recyclable waste has increased over the years, which is due not to an overall increase in waste produced at CIÊNCIAS, but to an increase in the fraction of waste that can be sent to licensed recycling and/or recovery operators and to composting and vermicomposting processes. Once again, the effect of the pandemic is visible in 2020 and 2021, with a very sharp decrease in the production and disposal of CIÊNCIAS waste, particularly in organic waste and paper.

It has been possible to increase the percentage of waste sent for recycling by placing outdoor recycling bins in strategic areas of the campus and also by placing small recycling bins inside buildings, thus creating dedicated recycling circuits.

CIÊNCIAS values Recycling, is a plastic recycling campaign run by CIÊNCIAS in partnership with Valorsul. At the same time, CIÊNCIAS provides more than 200 recycling facilities throughout the campus, including blue Ecopoint bins (for paper and cardboard), green Ecopoint bins (for glass packaging), yellow Ecopoint bins (for plastic and metal packaging) and Ecopoint bins for ink and toner cartridges; Ecopoint for fluorescent and discharge lamps; A place to dispose of used oil and place batteries and accumulators, as well as electrical and electronic equipment.

In what concerns the management of organic waste from the campus' green spaces and kitchens, CIÊNCIAS has implemented a composting and vermicomposting process, which aims to transform this waste into a high-quality product, thus reducing the impact of exporting waste from this system outside the campus and the resulting dependence on external sources of fertilisers.

Through these processes, around 11.2 tonnes of fine compost are produced each year, which has been used in the nursery to propagate plants, in the various projects and beds at HortaFCUL, donated to volunteers and shared with CIÊNCIAS' community at the donation stall.

By converting the problem of organic waste into an opportunity to improve the soil on the CIÊNCIAS Campus, we are improving the plants that grow here with positive externalities for the environment. Food waste no longer goes to waste, but is instead diverted to the PermaLab and becomes part of the vermicomposting process, feeding hungry worms, which in turn produce high-quality compost, ready to be used to produce other food that can be eaten again. In this way, it's possible to close the organic cycle of CIÊNCIAS.



### CIÊNCIAS Composter

**One year: 28 tonnes of waste and 11.2 tonnes of fine compost produced**



### CIÊNCIAS Vermicompostor

**One year: 1.3 m<sup>3</sup> of kitchen/bar waste processed and 0.9 tonnes of vermicompost produced**

## Hazardous waste

As a hazardous waste producer, CIÊNCIAS has implemented a hazardous waste management policy resulting from its activity that fulfils the requirements of legal regulations.

CIÊNCIAS takes an active role in preserving a healthy environment by applying good environmental practices, transferring knowledge in this area and raising awareness among employees, students and visitors. Correct waste management is not only a legal requirement, but also an obligation for the School of CIÊNCIAS.

The intentional disposal of chemical waste or hazardous substances into the environment is not permitted. Those in charge of each lab must ensure that all their employees comply with the rules on disposal and care when packaging hazardous waste.

They are responsible for the collection, storage and delivery of duly identified and packaged waste for subsequent treatment and/or disposal by a company licensed for the purpose.

Waste management also involves an attitude of prevention in the production of waste, which involves not only reducing its quantity but also its harmfulness, namely through reuse and changing production processes by adopting cleaner technologies, according to the twelve principles of Green Chemistry.

Choosing less hazardous reagents and minimising waste production is always the best environmental and financial solution for a good waste management policy.

## Carbon Footprint (Campo Grande Campus)

As part of a Masters Thesis for the Integrated Masters Degree in Energy and Environmental Engineering, a consumption survey was carried out for 2017, 2018 and 2019: electricity; natural gas; liquid nitrogen; refrigerant for air conditioning equipment; water; petrol, diesel and electricity for home-CIÊNCIAS ULisboa-home transport; paper, plastic, glass; food; urban solid waste (USW) treatment. The conclusions reached in the Masters Thesis were that typically the carbon footprint is around 1.6 tonnes of CO<sub>2</sub> equivalent per capita. Given that among students,

teachers and staff employees there are around 6,000 people, this represents an annual emission of 9,600 tonnes of greenhouse gas emissions. It should be noted that commuting home-CIÊNCIAS ULisboa-home accounts for 45% of emissions, followed by electricity (21%) and refrigeration (14%). The teaching of sustainable mobility (2<sup>nd</sup> and 3<sup>rd</sup> cycle curricular unit) aims to help raise students' awareness and thus help reduce the impact of commuting and scientific travel.

## 4. Sustainability Living Lab @CIÊNCIAS ULisboa

Ongoing since 2015, the Sustainability Living Lab @CIÊNCIAS ULisboa seeks to provide coherence and visibility to a diverse set of activities already underway and to boost the involvement of CIÊNCIAS' community and the surrounding reality in the challenge of sustainable development in all its dimensions.

Since CIÊNCIAS ULisboa is a higher education institution, one of its priority areas of activity is the promotion of quality education (SDG 4) based on the promotion of sustainability principles. Its action goes beyond this priority by taking on a governance strategy that applies those principles, carries out research in search of solutions to social problems, and promotes the active involvement of its community 'inside and outside' its doors. The Sustainability Living Lab thus aims to promote an inspiring set of good practices and an innovation ecosystem for sustainability on the school campus, working in various areas, namely in Innovation Activities: hosting monitoring and experimentation projects in all areas of sustainability; expanding

the ecological roof test area; carrying out studies on natural ventilation solutions; and promoting biodiversity on campus and in the surrounding area. Another area of activity of the Sustainability Living Lab is the Promotion of Citizenship, through the creation of behavioural awareness campaigns to save water and energy, and the creation/reinforcement of the training offer in the area of sustainability. Last but not least, the Sustainability Living Lab area of activity is related to communication and technology transfer activities, through the creation of CIÊNCIAS sustainability portal, the production of materials for dissemination in the area of sustainability, and the organisation of lectures, debates and other events.

The initiatives within the framework of this Living Lab that were active during the period covered by this report are presented below.





## Ecosystem services

Ecosystem services are all the benefits that human beings obtain from ecosystems. The provision of these services is supported by biodiversity and its interactions with the environment. Examples of these services are provisioning services (such as timber supply), regulation and maintenance services (such as erosion control and carbon sequestration) and cultural services (such as recreation in natural areas).

As far as CIÊNCIAS is concerned, ecosystem services are provided by its green and blue infrastructure, namely that located on the Lisbon Campus, but also that located at its field station in the Alentejo (Herdade da Ribeira Abaixo).

Herdade da Ribeira Abaixo (HRA) is located in the Serra de Grândola and covers around 221 ha. Much of the area is occupied by cork oak forests, with or without understorey, and there are also several riparian galleries. The HRA is owned by the Portuguese state and managed by the cE3c- Centre for Ecology Evolution and Environmental Changes of the University of Lisbon. It is a member of the international network for long-term socio-ecological research (ILTER network), representing the cork oak forest ecosystem.

The estate is managed with the aim of improving biodiversity and carrying out scientific activities. More information on projects, publications and other information can be found on the relevant page.

HRA provides important ecosystem services. These services include carbon sequestration which, taking into account the total area covered by cork oak forests, can be estimated at 180 tonnes C per year, assuming an average value of 88 g C m<sup>-2</sup> year<sup>-1</sup>. The total carbon stored in the cork oak forest area can be estimated at 52,000 tonnes, assuming an average value of 250 tonnes ha<sup>-1</sup>. Carrying out scientific activities is another important service associated with the estate, quantified in terms of classes, projects, PhD Theses and Masters Theses. As part of its biodiversity-orientated management, the estate also provides life cycle, habitat and genetic inheritance maintenance services, such as pollination and seed dispersal.



## Green spaces on the Campo Grande Campus

CIÊNCIAS is aware of the importance of biodiversity for sustainability, particularly in the urban context. This importance is linked to the essential role that biodiversity plays in the functioning and provision of ecosystem services such as local climate regulation, flood prevention and those related to human health and well-being.

Much of the campus's biodiversity is concentrated in the green and blue CIÊNCIAS, infrastructure, which occupies 29% of the campus area. This includes, in addition to the green areas of the street and its surroundings, the FCUL vegetable garden, the green roofs and, more recently, the FCULresta and its temporary lake.

Given the importance of native species, CIÊNCIAS has invested mainly in planting them. The trees scattered around the campus are identified on site with permanent markings and we would also highlight the planting of the FCULresta, made up entirely of native species. CIÊNCIAS' green areas have been used as a teaching tool for Biology Bachelor and Masters students, allowing them to monitor annual variations in plant species composition and coverage. The +Biodiversidade@Ciências project has been sampling all the biodiversity on campus and in its surroundings, which has already made it possible to detect more than 1,000 species in a collective effort by hundreds of watchers, through the BioDiversity4All platform.



## CIÊNCIAS Solidarity and Volunteering

Sustainable development includes building a more cohesive and supportive society and, consequently, a more sustainable one. Solidarity and volunteering are part of the civic principles that CIÊNCIAS disseminates in its community recognizing the educational and civic social value of such actions and experiences. The solidarity and volunteering initiatives carried out in CIÊNCIAS basically originate in the CIÊNCIAS Solidarity Association (ACS), a private non-profit association established on 6 April 2016 by a group of CIÊNCIAS staff with the aim of supporting the faculty's population in need (students and workers).

The CIÊNCIAS Solidarity Association has a deep conviction in the human potential of all those involved in the science community and in the ability to build more active and effective lines of solidarity that respond positively to the difficulties faced by members of our community. Even though there are financial limitations that certainly don't make it possible to take on every cause, the ACS relies on its volunteers and their enormous desire to solve the problems of their community, or at least to help alleviate the effects of some of these situations, including the individual needs of some students or workers that are constantly being monitored.

Due to the COVID-19 pandemic, CIÊNCIAS' community, like the country and the world, has experienced very difficult times, with great uncertainty and complexity about the short and medium-term future. This reality also forced the interruption of a number of solidarity initiatives such as sales, socialising or concerts, which were not possible at all during this period. Even so, for the period covered by this report, and before the lockdown, two fundraising campaigns were held in 2019 (Easter and Christmas events), two solidarity concerts (European Music Day

in Science 2019 and New Year in Science 2020) and a 'Computers for those in need' campaign was launched (April 2020) to collect laptops (reformatted by DSI) and donations to buy computers, all of which were lent to students who requested them. Around a dozen students were also supported through the payment of overdue tuition fees and aid for food and transport. In summary, all eligible students who requested help from ACS were supported.



Believing in the enormous human potential of our teachers, non-teaching staff and students, and in their ability to build real chains of solidarity, the ACS remains attentive and available to receive all the proposals that its members, or other protagonists in CIÊNCIAS, may wish to present, of various types (support for the distribution of food, medicines, school supplies, etc.) and to create, if necessary and possible, a 'pool' of collaborators.

## Ideas for Sustainability Competition on the CIÊNCIAS Campus

As part of the work carried out by the Sustainability Living Lab, the Ideas for Sustainability Competition on the CIÊNCIAS Campus, was created (first edition in 2019). It is an annual competition that aims to identify and promote initiatives by CIÊNCIAS members that can contribute to sustainability, in its various aspects, on campus and in its interaction with the city of Lisbon. This ideas competition requires teams to be mixed, i.e. they must include at least one student, one teacher/researcher and/or one non-teaching employee from CIÊNCIAS ULisboa and/or others whose work is usually carried out on the CIÊNCIAS Campus. The aim was to promote joint work between all the actors in the community, in order to raise awareness of the issue of sustainability among all CIÊNCIAS members. The selection process values the potential contribution to the sustainability of CIÊNCIAS as well as the feasibility of the project, including a cost-benefit analysis. The areas of intervention of the proposals may include, among others, the following themes:

The winning team of the 1st edition of the Ideas Competition (2019) was awarded ex-aequo to two proposals called **“FCUL+Verde: promoting and valuing flora in CIÊNCIAS”** e **“BioCommunity: together we discover biodiversity in CIÊNCIAS”**, as they are very

similar proposals. This merger gave birth to the +Biodiversity@CIÊNCIAS project: Mobilising CIÊNCIAS' community to promote sustainability on Campus which aims to apply the concept of sustainability to CIÊNCIAS' green spaces by characterising and monitoring the biodiversity on campus over time. The purpose of this project would be to involve both CIÊNCIAS' community and the citizens who live and work in the area. In this first edition, an honourable mention was also awarded to the proposal **“CHILL - Chicken Tractors as an efficient and sustainable Link in closed Loop agriculture”**. At the time of preparation of this report, both projects are at an advanced stage of implementation, collecting and analysing the data obtained and creating partnerships to disseminate the projects.



-  Efficient use of energy and/or water on the CIÊNCIAS ULisboa Campus
-  Energy generation and/or use
-  Reducing waste production
-  Reducing the processes' ecological footprint
-  Use of local products
-  Creation of measures to improve the well-being of communities
-  Reducing the impact of CIÊNCIAS ULisboa in the city of Lisbon, etc.

In the 2<sup>nd</sup> edition of the Ideas Competition (2020), first place was awarded to the proposal entitled **“Energy Consumption in CIÊNCIAS' Labs”**, as it was considered to foresee a continuation of work previously carried out as part of the school's Masters Theses, and also to promote the desirable involvement of the community on the theme of efficient energy use. In this edition, the Honourable Mention was awarded to the proposal called **“Ciências Connect”**, as it has the potential to significantly increase the connection between the virtual CIÊNCIAS Campus - Smart Campus - and the theme of sustainability. At the time of preparation of this report, both proposals are in the research and implementation phase.

The winner of the 3<sup>rd</sup> edition of the Ideas Competition (2021) was the proposal called **“FCUL Time Bank - Because at home you need everything”**, since the jury considered that this proposal had great potential to promote the development of the social pillar of sustainability, not only internally, but also externally, namely within the community around the School. The jury also considered it relevant that this application had a strong base, a clear expression of support from the

organisation responsible for the national Banco do Tempo network and was the first initiative of its kind in the context of a Higher Education Institution. In this third edition, an Honourable Mention was also awarded to the proposal entitled **“Audit of the Water Network - Status and Management of the Water Network of the Campus of the Faculty of Sciences of the University of Lisbon”**, where the jury considered that, although the proposal did not take into account previous or ongoing work in this field in CIÊNCIAS, it showed that the authors had carried out a very worthy piece of previous work, prepared with a degree of depth and rigour that deserved to be highlighted.

At the time of preparation of this report, the 4<sup>th</sup> edition of the Ideas Competition (2022) is underway, and the jury and the entire CIÊNCIAS community are very excited about the new proposals that will emerge.



## Projects @ Living Lab

CIÊNCIAS has several ongoing projects that promote sustainability within its campus and in the surrounding area. These projects relate to all dimensions of sustainability: economic, particularly in terms of energy efficiency; environmental, through the promotion of biodiversity; and social, supported by volunteering work.

Some of the projects embraced by the Sustainability Living Lab are presented below. Figure 28 shows the main Sustainable Development Goals (SDG) identified by the

coordinators of some Living Lab projects. It can be concluded that, in general, the projects analysed focus their activities on SDG 4 - Quality Education, SDG 11 - Sustainable Cities and Communities, SDG 13 - Climate Action and SDG 15 - Life on Land, related to the People, Planet and Prosperity dimensions.



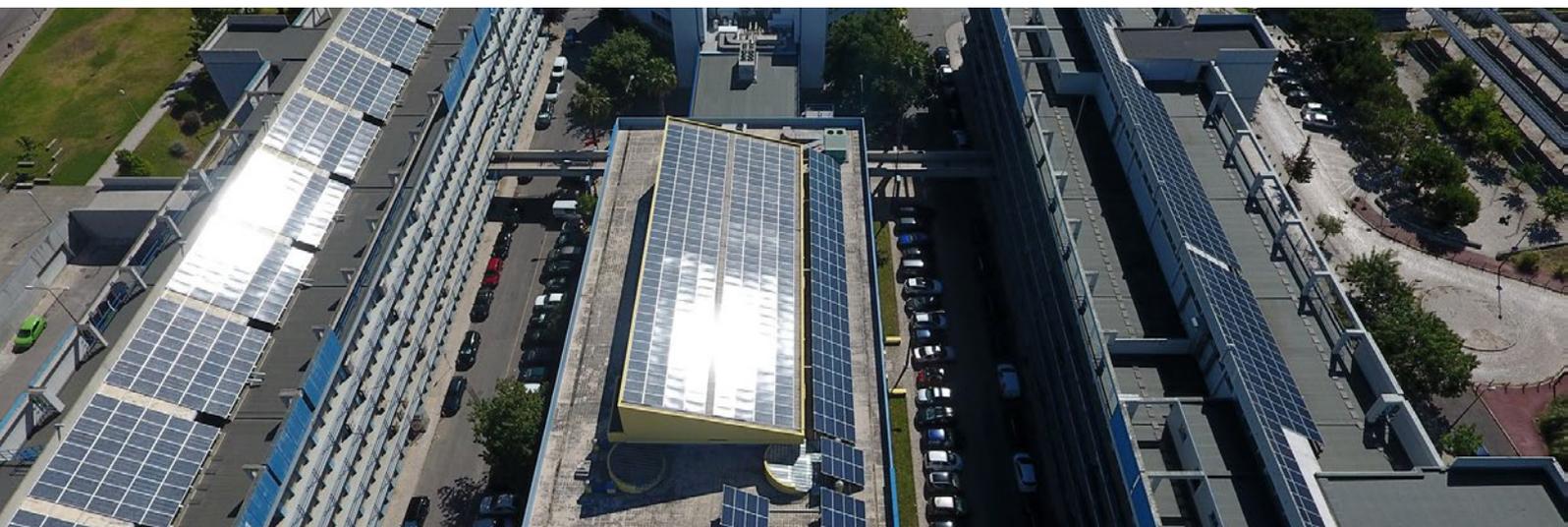
Figure 28 - Infographic identifying the SDG mapped in some of the Sustainability Living Lab projects.

## Solar Campus



In the field of energy, Solar Campus is a testing ground for characterising, testing and experimenting with solar energy systems under real conditions. Located in a small field until 2009, the Solar Campus is home to a diverse range of technological prototypes developed by companies, researchers and CIÊNCIAS students. It's also a lab that supports Energy and Environmental

Engineering courses and the school's calling card, the first place you see when you visit CIÊNCIAS, arriving from the Campo Grande side, just after the City's Museum. It includes a set of instruments for characterising solar radiation and weather conditions on CIÊNCIAS' Campus.



## Air Quality - RESPIIRA



The RESPIIRA - REde de sensores Piloto Inovar Ar project began at the end of 2018 as a result of an interdisciplinary collaboration of CIÊNCIAS. It consists of equipping CIÊNCIAS Campus with low-cost pollution sensors (noise, CO<sub>2</sub>, O<sub>3</sub>, NO<sub>2</sub>, PM<sub>2.5</sub>, NH<sub>3</sub>, temperature, humidity) with wireless communication and at points outside and inside the buildings.

As part of the General Ecology subject offered by the Plant Biology department, outdoor sensors will be installed in the same places where biomonitoring studies are already being carried out using epiphytic lichens to monitor air quality on campus and in its surroundings.

This sensor network will be mapped using geospatial tools and integrated into the CIÊNCIAS SMARTCAMPUS. The tool will make it possible to acquire outdoor and indoor air quality data and analyse it in some educational activities, research projects and science communication through the Sustainability Portal.

In this initial phase of the project, sensors are being tested as part of Masters and PhD Theses, the results of which are published [here](#) and [here](#).



CIÊNCIAS pioneered the installation of the first Ecological Roof at a Higher Education Institution in February 2013. With the support of Galp, Neoturf Espaços Verdes and ZinCo, it started a pilot project, installing an Ecological Roof using native species adapted to the local climate, whose evolution is being monitored by teachers and students, contributing to a better understanding of the functioning and sustainability of these structures in Mediterranean areas.

Ecological roofs are green spaces located on the roofs of buildings with minimal maintenance requirements, using species adapted to the local climate, and have the following main benefits: Thermal insulation of buildings; Structural protection of buildings; Rainfall retention; Atmospheric carbon sequestration; Promotion of biodiversity in cities; and Creation of leisure areas. To plant CIÊNCIAS' Ecological Roof, it was necessary to set up a structure with the right substrate and drainage for the selected vegetation, while maintaining the integrity of the building.

The green roof is located in the area between buildings C4 and C5 and can be seen from the 3rd floor of C1, C2 and C4.

Its total area: 105 m<sup>2</sup>, 1560 plants of 4 different Sedum species planted at the time of planting. Eight years after the installation of the Ecological Roof, out of the 4 initial species, only two dominate the roof (*S. sediforme* and *S. acre*), native species, while the other two (*S. album* and *S. rupestre*) are less visible. The site's productivity is not as low as one might think, with 4.4 kg of fresh biomass removed during the last weeding. With the help of the wind and birds, the seeds of various annual and herbaceous perennial plants that flourish on the site (e.g. *Centranthus calcitrapae*, *Micromeria graeca*) have reached the roof. Other species, which are not so innocuous for the roof due to their size or the length of their root system, are removed through weeding, 1-2 times a year. These include large trees such as oaks (acorns carried by jays, probably from C6) or poplars and palms (also present on campus), among others.

Together with the [+Biodiversidade@CIÊNCIAS](#) project, work has begun on marking the species present on the roof, differentiating between those that have been planted and those that appear spontaneously.



In the area of biodiversity and ecosystem services, CIÊNCIAS, in collaboration with the plant ecology course, has been sampling all the plant species and labelling the main tree species on campus since 2004.

In order to expand this knowledge, the +Biodiversity@ CIÊNCIAS project, winner of the 2019 sustainability ideas competition, is being developed. This project aims to apply the concept of sustainability to CIÊNCIAS ULisboa green spaces and to characterise and monitor their biodiversity over time, involving both CIÊNCIAS' community and the citizens who live and work in the area. To do this, the project team uses classic biodiversity surveys (flora and fauna), sophisticated monitoring equipment (video, acoustic sensors and drones) and citizen science. Citizen science is the involvement of citizens in scientific processes, enabling them to acquire knowledge in different areas and to develop a greater sense of analysis and critical thinking. The involvement of these

non-professionals in scientific research and environmental monitoring has also become a new scientific approach. This component is promoted on the BioDiversity4All platform, through which everyone - CIÊNCIAS' community and those who live or work nearby - can contribute to species records, increasing knowledge about the diversity of the campus, its natural values and ecosystem services, and assessing trends in the face of a climate change scenario.

The project began on 1 September 2020 and as at the date of publication of this report, 4,642 observations have been made and 894 species identified, by 169 watchers and 570 identifiers.



'FCULresta' is a dense, biodiverse and multifunctional mini-forest in the heart of the city. It aims to be a practical reference for a transdisciplinary approach with a profound mobilisation of society for climate action, the promotion of urban biodiversity and other Sustainable Development Goals of the Faculty of Sciences of the University of Lisbon. In addition to institutional support and its practical side, FCULresta seeks to have a strong scientific component, thus contributing to a deeper understanding of the function of these naturalised spaces in an urban context.

The FCULresta project is working directly on the campus, transforming an old lawn into a mini-forest with a high density of plants. This transformation took place over a short period of time, at the beginning of March 2021, involving dozens of volunteers from CIÊNCIAS and other education institutions, who planted more than 600 plants, installed two insect hotels, an amphibian refuge, another for reptiles, and sensors to monitor the soil.



## PermaLab - Permaculture Living Lab



In October 2009, on the initiative of a group of CIÊNCIAS students, the HortaFCUL project was created, which would later give rise to the Permaculture Living Lab in collaboration with the cE3c Research Centre. Permalab concentrates its activity in a space on campus that has been given over to testing innovative solutions proposed by permaculture, where multiple interested parties collaborate in the development of projects that are thought and designed in a systemic way, applied in a real context, with a local identity and based on ecological principles.

PermaLab is thus an ecosystem open to innovation, centred on its users, integrating research and innovation processes proposed by permaculture in a transdisciplinary and transformative research-action environment with public-private-personal partnerships. As permaculture is a science-based planning system that mimics ecological patterns and relationships, PermaLab aims to evaluate and create scientific evidence of nature-based solutions, contributing to the regeneration of the university campus and mobilising the CIÊNCIAS community.



## Agroecological Caravan



The Agroecological Caravan (Caravana AgroEcológica - CA) is a participatory project of the MITE2 research group at cE3c, FCUL (Centre for Ecology, Evolution and Environmental Change at the Faculty of Sciences of the University of Lisbon), which aims to bring farmers, consumers and researchers together through agroecology.

The Agroecological Caravan includes 5 initiatives: open days for producers; agroecological vegetable gardens; caravan routes; the Caravana AgroEcológica radio programme; and public policy analysis. The project aims to co-create a good practices guide for gathering agroecology knowledge, an online platform and an educational programme.





The 'Ciências Connect' project aims to promote the inclusion and participation of users of the Faculty of Sciences Campus of the University of Lisbon, be they students, teachers or visitors, by implementing a location-based service that uses beacons to disseminate information. These devices will be placed in the most visited areas of the campus in order to maximise their use by CIÊNCIAS' community.

Beacons are small devices that transmit signals containing information (e.g. URL addresses) using bluetooth technology, to other devices in their vicinity and which can be accessed using an application. If set up for this purpose, the user's mobile device will automatically receive the notifications being transmitted when it passes near an active beacon.

Once the beacons are in place and activated, it will be possible to access the URL addresses of web pages containing at least three levels of information in a very simple and straightforward way: More comprehensive context information; Information from Sustainability Living Lab @ CIÊNCIAS ULisboa; Information associated with the building(s) near each beacon.

The implementation of this project hopes to boost the use of existing tools that can be useful to students or visitors on campus and to promote the dissemination of news from CIÊNCIAS' community (e.g. projects, papers, initiatives, grants and awards) through a location-based service accessible to all and directly during their daily activities on campus.

# Mapping Practices – Events and Campaigns



## 'Integrating the Sustainable Development Goals in Higher Education'

Seminar held on 21 March 2019, in partnership with ISCTE. Representatives from national and foreign universities and other organisations took part in the event, where it was possible to debate the teaching of sustainability, the role of Higher Education Institutions (HEI) and the importance of best sustainability practices.

## Energy Open Day

Open day dedicated to energy, held on 18/02/2019. According to the IDL - Instituto Dom Luiz organisers, this event took place in the Auditorium of FCiências.ID, Lisbon, and was attended by several teachers and researchers from CIÊNCIAS and external.

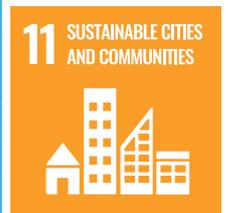
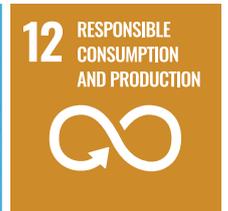


## Climate Change and the Oceans of the Future

The exhibition, at the King D. Carlos Sea Museum, in Cascais, opened on 9 February 2019, with the participation of MARE - Marine and Environmental Sciences Centre and CIÊNCIAS ULisboa.

## Planting Action

Held in February 2019. It was a time for sharing knowledge and learning, for socialising and involving researchers, students, neighbours and friends of Herdade da Ribeira Abaixo. The agroforest area, orchard, aromatic plants and water lines were planted as part of the Iberian project 'LIFE Montado & Climate: a need to adapt'.

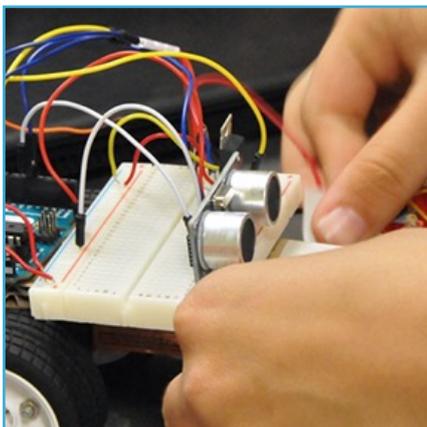


### **HortaFCUL 2019 Training**

Between 06/03/2019 and 22/05/2019, various training courses were held under the HortaFCUL label, including 'Biofertilisers workshop', 'Irrigation workshop' and 'Talk about transitioning communities', 'Feminisms and new masculinities workshop', 'Introduction to Permaculture course' and 'Insect Hotel workshop'.

### **Let's Clean Up CIÊNCIAS**

Let's Clean Up CIÊNCIAS took place on 16/05/2019, in a partnership between the Ulisboa Biology and Sciences Students Group, which joined the Let's Clean Up Europe initiative. CIÊNCIAS students, teachers, staff and collaborators were invited to join in a practical action aimed at raising the community's awareness to the importance of reducing waste, reusing products and recycling materials, for the greater good of our planet!



### **5<sup>th</sup> edition of the Energy Summer School of the Faculty of Sciences of ULisboa**

Held between 08 and 12 July 2019. Students in secondary school years 11 and 12 were able to take theory classes on basic sustainability concepts, assessing the resource of renewable energy sources, sustainable mobility, buildings of the future and integrating renewable energies; and laboratory classes and fieldwork, with measurements of energy consumption, workshops on building environmental sensors, solar cars, cooking with the sun (with the Ecocactus company), and much more.



**Plasticus maritimus, an invasive species exhibition**

Inaugurated in the lobby of the C6 building on 17/10/2019, by artist Ana Pêgo. Plasticus maritimus is the 'scientific name' of an 'exotic marine species' that has proliferated throughout the world's oceans and beaches. It is an 'invasive species', well-adapted to all environments, which represents a major threat to native biological communities and, consequently, to humans.



**The Transformation - Journey to the Inner Self**

The screening of this documentary by Rita Pimenta, on Permaculture, took place at CIÊNCIAS ULisboa on 15/07/2019. A documentary that portrays the experience of a PDC, on a Certified Permaculture Design Course, over 10 days of internal and external soil regeneration work.

**1<sup>st</sup> CIÊNCIAS Research Day 2019**

Held on 30/10/2019, it was a day dedicated to sharing, curiosity and imagination. An opportunity for Faculty researchers to share their work with the internal and external community.



### **1st Sustainable Campus Conference**

With the theme 'Sustainable Development: Higher Education Institutions as Agents of Change', was held on 31/10/2019 at the Faculty of Engineering of the University of Porto and was a moment of reflection and exchange of experiences on initiatives and ways of implementing the Sustainable Development Goals in HEI.



### **Sustainable Campus Network**

CIÊNCIAS is an active member of the activities developed by the Sustainable Campus Network (RCS), through the participation and promotion of various members of its community in all the working groups, and is also responsible for co-organising webinars and events. CIÊNCIAS has been part of the RCS since the beginning of its existence, having signed a letter of intent that constitutes a commitment to sustainability principles and practices in higher education.



### **Sustainability Ideas Competition**

Sustainability Ideas Competition held in 2019, 2020 and 2021, with the aim of identifying and promoting initiatives by members of CIÊNCIAS that can contribute to sustainability, in its various aspects, on campus and in its interaction with the city of Lisbon. need to adapt!



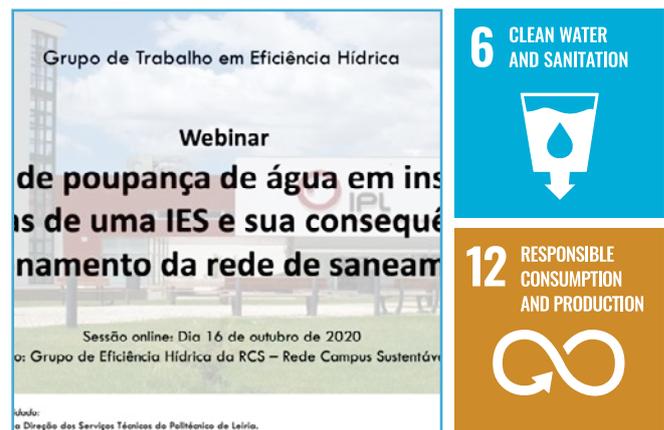
**National Meeting on Climate Change Research**

Held on 17 and 18 February 2020 at the CIÊNCIAS ULisboa Grand Auditorium. This event, co-organised by CIÊNCIAS ULisboa and the Lisbon City Council, as part of the Lisbon European Green Capital 2020, initiative included round tables covering diverse topics such as climate modelling and sectoral impacts (ecosystems, economy, global and local political decision-making).



**'SDGs Strategies of Universities and THE Impact Rankings' webinar**

Broadcast online on 9/09/2020 by UNICA, it presented a discussion of the latest results of the Times Higher Education Impact Rankings, which can be an excellent opportunity for universities to assess their performance and improve their strategies in relation to the Sustainable Development Goals.



**'Water-saving measures in the sanitary facilities of an HEI and their consequences for the operation of the sanitation network' webinar**

Broadcast online on 16/10/2020 by the Water Efficiency of the Sustainable Campus Network working group, where the case study of the Polytechnic Institute of Leiria was presented, with the various water-saving measures carried out over the last few years.



**2<sup>nd</sup> Edition of CIÊNCIAS Research Day 2020**

Held on 28/10/2020, it was a day dedicated to sharing, curiosity and imagination. An opportunity for Faculty researchers to share scientific achievements and contributions to the fight against COVID-19, an important sharing with the internal and external community.



**2<sup>nd</sup> Sustainable Campus Conference 2020**

under the theme 'Smart Initiatives for a Sustainable Campus'. This event, which took place at the Polytechnic Institute of Tomar on 30/10/2020, aims to serve as a platform for collaboration and the exchange of ideas between students, academia, researchers and specialists, in the search for smart and innovative solutions for a more sustainable future.



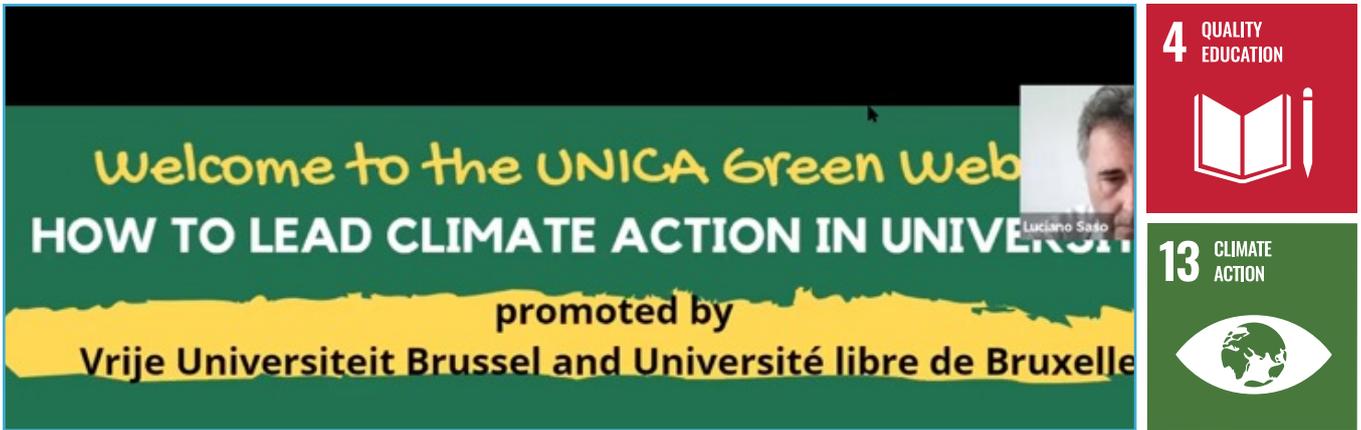
**Waste Management Webinar: implementation of communication circuits and strategies**

Broadcast on 10/11/ 2020, by the Waste Management of the Sustainable Campus Network Working Group - Portugal. This webinar was dedicated to the experience of implementing internal waste management circuits in CIÊNCIAS ULisboa, and the communication strategies associated with changes in waste management behaviour.



**'Invisible Waste' webinar**

Broadcast online on 27/11/2020, it was promoted by the students of the Bachelor Degree in Environmental Health of the Lisbon Health Technology School of the Polytechnic of Lisbon (ESTeSL-IPL). CIÊNCIAS ULisboa participated in this event by sharing knowledge on the challenges of waste management circuits and proposals for possible solutions.



**'HOW TO LEAD CLIMATE ACTION IN UNIVERSITIES?' Webinar**

Broadcast online on 16/12/2020, the various speakers gave their input on methodologies for developing and implementing a climate action plan.



**'Hidden energy poverty: The student perspective'**

Held on 14/01/2021, organised by ÚNICA. The webinar provided information and shared good practices and recommendations from the H2020 SAVES 2 project, led by a consortium of 11 partners in 8 European countries and coordinated by the National Union of Students UK. This project achieved the objectives of promoting sustainable energy behaviour among more than 250,000 students across Europe, helping them to reduce their exposure to fuel poverty, minimising their carbon footprint and raising awareness of further energy-saving actions.



**Hazardous Waste Webinar**

Broadcast on 12/01/2021, it was organised by the Waste Management of the Sustainable Campus Network working group – Portugal, with the participation of CIÊNCIAS ULisboa and the Stericycle company. This webinar was dedicated to the management of hazardous waste produced in CIÊNCIAS ULisboa and the final destination of this waste, which is sent to the licensed operator Stericycle.



**'Concept and application of circular economy in the various areas of product value chains: Examples of good practices' webinar**

Broadcast online on 18/01/2021 by the Circular Economy of the Sustainable Campus Network working group, where the Permalab project was presented as an example of good practices, with an exhibition of urban permaculture solutions.

**'Sustainability Governance in Higher Education – what matters? – disseminating research and practice examples from Germany and Portugal' webinar**

Broadcast online on 28/01/2021, by the Governance and Strategy for Sustainability of the Sustainable Campus Network working group. Practical examples of sustainability governance in higher education in Germany and Portugal were presented at the event, which included the Faculty of Engineering of University of Porto.



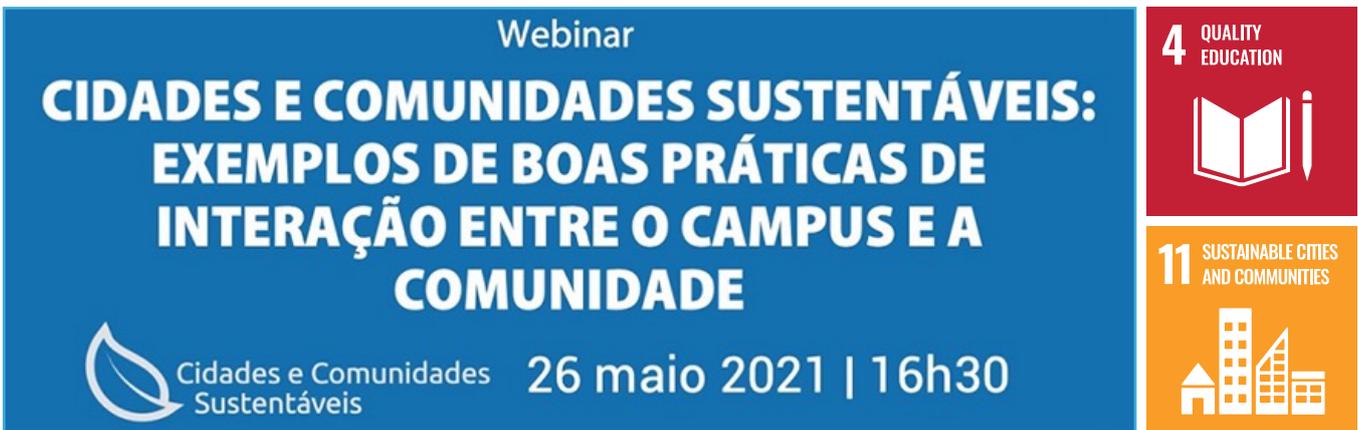
**'Sustainable Food in Higher Education Institutions in Portugal, challenges and opportunities'**

Broadcast online on 12/02/2021, by the Sustainability of Food Production and Consumption of the Sustainable Campus Network working group. This webinar presented two case studies and discussed the challenges and opportunities for improvement in terms of sustainable consumption and production in higher education institutions.



**Energy Transition Open Day**

Open day broadcast via videoconference, which took place on 3 March 2021. IDL's RG5 group presented its research on energy transition: solar energy technologies, energy efficiency in construction and urban sustainability.



**Sustainable Cities and Communities Webinar**

Broadcast online on 26 May 2021 by the RCS Sustainable Cities and Communities working group, presenting examples of good practice in campus-community interaction, and discussing the role of Higher Education Institutions (HEI) in urban sustainability and how they can strengthen interaction with society, making it more sustainable.

**Boas Práticas de Mobilidade Sustentável em Instituições do Ensino Superior**



**Carla Silva**  
Doutorada em Engenharia Mecânica na UL | Professora na FCUL | Funções de coordenação no MEA.

**João Anjos**  
Aluno de 3º ano da Licenciatura de Saúde Ambiental da ESTeSL, UO do IPL.



**4 QUALITY EDUCATION**



**11 SUSTAINABLE CITIES AND COMMUNITIES**



**From linear to circular ideas**



**Premiação:**  
1º Lugar - 2000 €  
2º Lugar - 750 €  
3º Lugar - Produtos PET (Soja de Portugal) e Delta Cafés.  
+ Estágios Remunerados

**4 QUALITY EDUCATION**



**12 RESPONSIBLE CONSUMPTION AND PRODUCTION**



**Good Practices in Sustainable Mobility in Higher Education Institutions**

Broadcast via videoconference on 14/06/2021, this event, promoted by the Sustainable Cities and Communities of the Sustainable Campus Network working group, was attended by CIÊNCIAS ULisboa and other entities that presented studies and projects on sustainable mobility at some Higher Education Institutions.

**'From linear to circular ideas' competition**

The final event with the announcement of the competition winners took place online on 26/06/2021. This competition was organised by the Circular Economy of the Sustainable Campus Network working group and its main objective was to promote, disseminate and identify creative ideas related to circular economy.

**O Estado da Alimentação no século XXI, nas Instituições de Ensino Superior**

**Património | Sustentabilidade | Tendências**

**TEORIA**

**Pedro Graça**  
Diretor e docente da Faculdade de Ciências da nutrição e da Alimentação da UPorto  
**Dieta Mediterrânica**

**Manuela Vaz Velho**  
Professora/Coordenadora de Engenharia Alimentar na ESTG do Instituto Politécnico de Viana do Castelo  
**Dieta Atlântica**

**Rafael Pinto**  
Jurista, Mestre em Direito da UE, especializado em Política Agrícola Comum  
**Dieta Vegetariana**

**Maria Antónia Nunes**  
Investigadora e Doutoranda em Ciências Farmacéuticas e Mestre em Ciências do Consumo e Nutrição  
**Tendências Alimentares**

**30 JUN**

**EM DIRETO**

**10H-12H**

**PRÁTICA**

Alunos, Produção, Restauração Pública, Catering, Retalho, Serviços Ação Social

**EXPERIÊNCIAS & TESTEMUNHOS**

**2 ZERO HUNGER**



**4 QUALITY EDUCATION**



**Webinar: The state of food in the 21<sup>st</sup> century in Higher Education Institutions**

Broadcast online on 30/06/2021, organised by the RCS Working Group on the Sustainability of Food Production and Consumption. This event focused on the Mediterranean, Atlantic and Vegetarian Diets and Food Trends, presenting the perspectives of the various players in the food chain (producers, caterers, social services, students) and identifying the challenges and opportunities for improving food at Higher Education

**como melhorar a sustentabilidade urbana?**

Workshop online  
5 julho 2021  
9:30 - 15:00

serviços ecossistemas | agricultura & ecologia | promover biodiversidade | bibliotecas & sustentabilidade | dilemas sustentabilidade ambiental | ciência cidadã

registo & +info  
participação gratuita  
registo obrigatório

CE3C | LISBOA | LASIGE



RCS

Sustentabilidade da Produção e do Consumo Alimentar | Economia Circular | Gestão de Resíduos

**Webinar - Gestão de Resíduos Orgânicos**

14 de Julho de 2021

18h00-18h20  
**Soluções técnicas para gestão de resíduos orgânicos - presente e futuro.**  
Orador: Dr. Daniel Murta (EntoGreen)

18h20-18h40  
**Enquadramento legal para a implementação de novas soluções em cantinas.**  
Oradora: Dra. Cirila Almeida (DGAV)



### Workshop: How to improve urban sustainability?

This online event was held on 05/07/2021 and organised by CE3C - Centre for Ecology, Evolution and Environmental Changes. It included presentations on areas where everyone can intervene in the sustainability of cities - agriculture, biodiversity, green spaces and schools - without forgetting the dilemmas of environmental sustainability. Researchers and experts in these fields participated and launched Ecological Mapping, a citizen-science app available for Android to collect data on the structure of urban habitats, which will then be used to improve the characterisation of urban biodiversity and its ecosystem services.

### Webinar on Organic Waste Management

Organised by the Waste Management, Circular Economy and Sustainable Food Production and Consumption of the Sustainable Campus Network working groups. This online event took place on 14 July 2021 and had the participation of CIÊNCIAS ULisboa in the debate 'Barriers and opportunities for better organic resources management in canteens'.



### 3<sup>rd</sup> edition of CIÊNCIAS Research Day 2021

Held on 27/10/2021, it was a day dedicated to sharing, curiosity and imagination. This edition was dedicated to Climate Change - an area in which CIÊNCIAS ULisboa is leader - with contributions on internationally important research developed at CIÊNCIAS and information on national and international scientific projects and collaborative initiatives.



**16** PEACE, JUSTICE AND STRONG INSTITUTIONS



**17** PARTNERSHIPS FOR THE GOALS



### **3<sup>rd</sup> Sustainable Campus Conference 2021**

under the theme 'Sustainable Campus: Challenges and Opportunities', held on 28-29 October 2021, and organised by the Polytechnic of Lisbon. This conference was a forum for discussion and reflection on the latest advances in research, innovation and practices in the implementation of the Sustainable Development Goals (SDG) in Higher Education Institutions in Portugal and in Portuguese-speaking countries.



Closing this first sustainability report of CIÊNCIAS ULisboa, we can guarantee that CIÊNCIAS will maintain its commitment to finding solutions to society's problems and will support the transformation of the community and its vision of the future in favour of sustainable development. In short, the Sustainability Living Lab is intended to be a window for sharing good practices open to the outside world, through which CIÊNCIAS aims to contribute and receive contributions to the sustainability challenge.



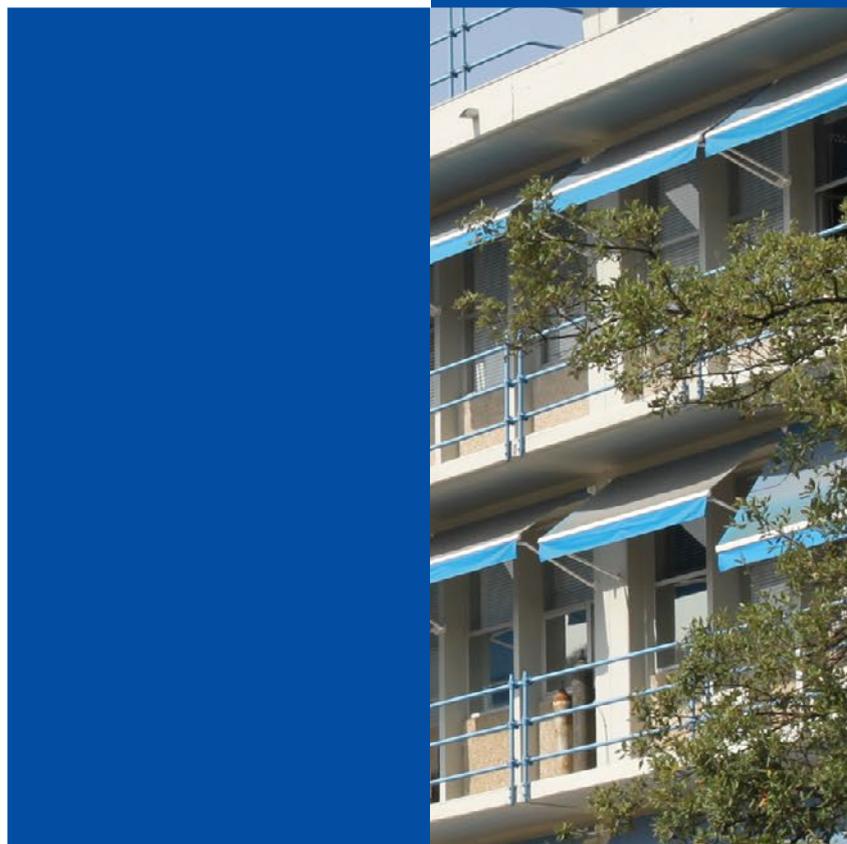
This report was prepared in accordance with the guidelines established by the Global Reporting Initiative (GRI) for Sustainability Reporting (2013 version), in the 'Essential' option, adapted to the assessment of a Higher Education Institution. The information contained in the report has not been subject to external verification by an independent entity.

- **Report Structure:**  
The approach used to report on sustainability is based on a methodology of analysing the institution and its operation, education, research, and the transfer of existing knowledge, as well as the academic community's relationship with its surroundings and the protocols and partnerships established. An analysis is also made of the sustainability performance indicators and the projects developed and under development in the area of sustainability.
- **Reporting period:**  
This report assesses the activities of CIÊNCIAS in the field of sustainability over three years, from 1 January 2019 to 31 December 2021.
- **Frequency of publication:**  
This 1<sup>st</sup> report assesses 3 years of activities, and the next ones will be published once every 2 years.
- **Author:**  
Sustainability Commission of the Sustainability Living Lab.
- **Coordination:**  
Filipa Pegarinhos – Safety, Health and Sustainability Office
- **Verification of information:**  
The information contained in this report has not been externally verified by an independent entity.
- **Images:**  
Communication and Image Unit of the Faculty of Sciences of the University of Lisbon
- **Design and illustrations:**  
João Rocha
- **Date of publication:**  
19 December 2022
- **Suggestions and contacts:**  
For suggestions, opinions, clarifications or questions, please contact us:  
  
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 **Make a difference: Think twice before printing and opt for more sustainable practices.**

**CIÊNCIAS**  
**Sustainability Report**  
**2019-2021**

**December 2022**



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de Lisboa

