ENVIRONMENTAL SUSTAINABILITY PLAN
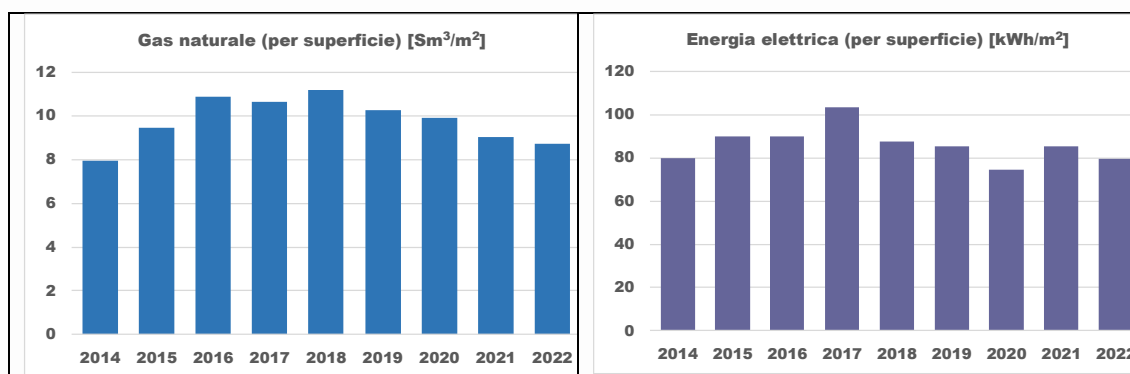
2024

FOREWORD

The pandemic years, 2020 and 2021, were severely affected by the Covid-19 emergency, which impacted the policies and procedures described in the Environmental Sustainability Plan in force at the time. In 2022 things gradually returned to normal and the University could resume work on environmental sustainability in a more relaxed environment. The effects of the pandemic on several commodities are clearly illustrated in the charts below. By comparing post-pandemic and pre-pandemic data from 2022 and 2019 (indicators measure consumption by surface area or per capita, depending on the type of commodity), the University's performance generally improved, except for water consumption. Since 2021, the electricity used by the University is entirely from renewable sources.

Sustainable development today involves a complex series of global, European and national programmes. UniTrento fully understood this scenario, as its 2022-2027 Strategic Plan demonstrates with one of its four strategic clusters focusing on sustainability.
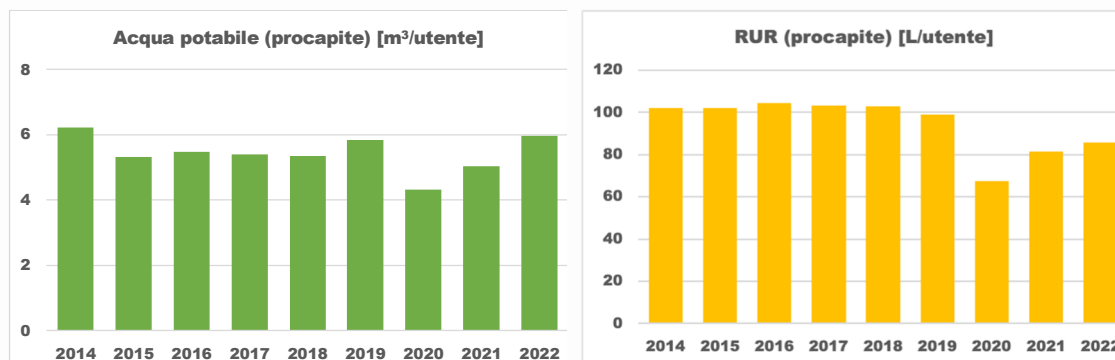
Indicators of surface area consumptions

[natural gas on the left, electricity on the right]

Indicators of per capita consumption

Acqua potabile (procapite) [m³/utente]

RUR (procapite) [L/utente]

[drinking water on the left, non-recyclable waste on the right]

1. INTRODUCTION TO THE 2024 ENVIRONMENTAL SUSTAINABILITY PLAN

1.1 Universities and sustainability

In July 2015, the Conference of Italian University Rectors (CRUI) created the Italian Network of Universities for Sustainable Development (RUS), which currently has 86 members. UniTrento officially became a RUS member in June 2017. UniTrento has members in all RUS Working Groups: climate change, food, education, energy, inclusion and social justice, mobility, resources and waste, universities for industry. The latter is a newly established Working Group (2023) in which UniTrento has participated since the beginning. As regards waste, UniTrento hosted a RUS training course in 2023.

1.2 UniTrento and the two previous editions of the Environmental Sustainability Plan

The University adopted an Environmental Sustainability Plan for the first time in 2016, with a roadmap for the achievement of 14 objectives grouped in four large areas: "Emissions, energy and natural resources", "Buildings and procedures", "Culture and education" and "Health and well-being". After a one-year transition period, which proved very useful to reorganize the strategies, the second Environmental Sustainability Plan (2020-2021) was approved. The Covid pandemic of 2020-2021 (the emergency ended in March 2022) significantly changed things. The university therefore deemed it appropriate to wait until things went back to normal (also in light of the subsequent energy crisis) to start working on a new Environmental Sustainability Plan.

2. THE NEW 2024 ENVIRONMENTAL SUSTAINABILITY PLAN, A TRANSITION PLAN

This document is the 2024 Environmental Sustainability Plan, a transition plan whose purpose is to define in quantitative terms the objectives of the forthcoming 2025-2027 Plan, that will cover a three-year period, bringing our university in line with the planning of other universities. This three-year plan will have to consider actions with a longer-term vision, to 2030 and 2050. The

actions planned for 2024 come with a calendar of decision-making strategies that is necessary to quantify the University's strategies.

From the point of view of content, the new Plan (similarly to the previous one) aims to increase the level of environmental sustainability of UniTrento by defining the objectives through two methods: a participation process and proposals for actions that are identified based on the previous planning period. In this case, a distinction is made between the actions that will be implemented in 2024 and a calendar of decisions that must be made in 2024 for the years to come, particularly in view of the 2030 and 2050 goals.

2.1 The participation process

UniTrento established a permanent discussion table, the Green Office, where students, faculty and staff propose and implement the sustainability initiatives envisaged by the Environmental Sustainability Plan. The Green Office has recently been reorganized and it now includes 5 thematic working groups (Energy, Resources and Waste, Food, Mobility, Training) and a harmonization team that connects the various activities and is also the main interface of the working groups with the Green Office (now called Green Office 2.0). The Green Office, with its working groups, also contributes to the definition of the Environmental Sustainability Plan. The next three-year plan will welcome proposals from the community, including through UniTrento Sostenibile (unitrento-sostenibile@unitn.it) and the University's Environmental Sustainability Day, that will be celebrated every year.

2.2 Technical aspects

2.2.1 The structure of the new Environmental Sustainability Plan

The roadmap adopted by UniTrento for this new version of the plan is organized in four areas, including a total of 11 sections:

- **Emissions, energy and natural resources:**
  - University carbon footprint
  - Renewable energy
  - Waste management
  - Drinking water management
  - Sustainable mobility
- **Buildings and procedures:**
  - Consumption monitoring systems
  - Green Procurement
- **Communication and culture of sustainability:**
  - Sustainability communication
  - Curriculum of study
- **Health and Well-Being:**

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- Indoor air quality
- Working time and work-life balance

2.2.2 Actions and planning

The actions below are steps towards the achievement of the sustainable development goals illustrated in the infographic.

▪ Emissions, energy and natural resources:

UNIVERSITY CARBON FOOTPRINT	
Current situation	In past years, data on the University's energy consumption have been converted into greenhouse gas emissions. This, combined with the recommendations provided by the Working Group on Climate Change of the RUS network, allowed us to have a first estimate of the University's greenhouse gas emissions inventory. However, the calculation of CO_2 emissions associated with the individual sectors has not been reported in this document because the methodology is being reviewed as part of the activity of the organization that has been tasked with developing the University's decarbonisation plan.
2024 Targets	Support the organization mentioned above in the drawing up of the University's greenhouse gas emission inventory, estimating the carbon footprint and defining the University's Decarbonisation Plan.
Results expected in 2024	Have the University's carbon footprint by 31 March 2024. The University's Decarbonisation Plan can only be drafted after the calculation of the carbon footprint and, above all, based on the economic resources available, which are currently unknown. It will however be possible to identify a number of priority actions based on an estimate of extent of the investments necessary by 30 June 2024.
2030-2050 Planning	The Decarbonisation Plan must also formally include the long-term objectives.
RENEWABLE ENERGY	
Current situation	The University's electricity supplier certifies that all energy is sourced from renewable energy sources. This has led to a significant reduction of CO_2 emissions from the University's activities. The University contributes to the generation of electricity from renewable sources through the photovoltaic systems installed on the roof of the Central

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	University Library (BUC) and the Mesiano University Library (BUM). Photovoltaic panels will also be installed on Building no. 10 of Manifattura Tabacchi by the end of the year. In addition to the Energy Working Group that is part of the Green Office, the University also has an Energy Task Force whose role is to promote synergies between the University and the Autonomous Province of Trento in this strategically important area. The task force was established on the initiative of a student association. Works are being planned to increase the photovoltaic surface area and gradually reduce the use of natural gas.
2024 Targets	• Adoption and use of an indicator that measures the ratio between usable surfaces and available surfaces for the installation of photovoltaic panels on University buildings (with annual publication of data). • Adoption of a communication strategy to inform the community about the renewable energy produced by the University. • Identification of funding sources for the necessary decarbonisation works on the University's energy system (efficiency and system adjustments). • Periodic monitoring of local initiatives by Renewable Energy Communities to consider the opportunity to join them.
Results expected in 2024	• By the end of 2024, publication of the indicator that measures the use of photovoltaic surfaces on the UniTrento Sostenibile website. • By the end of 2024, publication on the UniTrento Sustainable website of the amount of kWh produced by the photovoltaic panels owned by UniTrento. • Identification of funding sources for the necessary decarbonisation works on the University's energy system (efficiency and system adjustments). • Definition of a University strategy regarding the participation in Renewable Energy Communities.
2030-2050 Planning	• Maximize the installation of photovoltaic panels in view of 2030 based on the survey of potentially available surfaces conducted in 2024 and periodically updated.
WASTE MANAGEMENT	
Current situation	The separate waste collection in offices and snack areas has been optimized with new bins for different materials, organic waste and disposable cups and spoons. At the same time, ashtrays have been installed at each site for the recovery of cigarette butts that, through a recycling and transformation process, can be used to create other products. However, more than 2/3 of the volume of residual municipal waste is in excess of the minimum volume calculated by the municipal waste collection company. UniTrento is about to publish its waste management guidelines that will focus, in particular, on encouraging the same collection practices for special waste from laboratory activities for all departments. These guidelines also include some training for technical and laboratory staff. The guidelines now comprise operative instructions for all types of special waste produced by the University.
2024 Targets	A number of objectives that had been set for the previous Plan are still valid for 2024: reducing the volume of general waste produced, reducing the amount of plastic packaging introduced in the university, promoting waste reduction initiatives, including from members of the community, continuing with the awareness-raising campaign on separate waste collection and optimising the

	waste collection system. Another goal however is to introduce quantitative methods for measuring waste production and management.
Results expected in 2024	Unlike the previous Plan, for 2024 the goal is not only to meet the above targets but also to quantify their achievement through specific indicators. The plan is to establish and use, by 31/3/2024, indicators regarding the following aspects: • elimination of single-use plastic in university restaurants, in collaboration with Opera Universitaria • the award of catering services contracts to companies that do not use single-use plastic • support of specific projects proposed by community members • gradual replacement of paper towels with electric hand dryers, based on economic and environmental considerations, giving priority to departments, centres and facilities that are about to undergo renovation • renewal of the collaboration with Dolomiti Ambiente to have periodic monitoring of errors in the disposal of waste for the municipal waste generated by the University Other aspects may be less effectively quantifiable, for example: • development of guidelines for the surveillance of outdoor areas used for the emptying of containers by the waste collection company • continuation of the communication campaign to raise awareness among the community to properly separate waste, while promoting waste and plastic reduction initiatives • reduction of costs from errors in the disposal of waste or non-optimized waste
DRINKING WATER MANAGEMENT	
Current situation	In recent years, per capita consumption of drinking water at University facilities has slightly decreased. All university premises have been equipped with drinking water fountains to discourage the consumption of bottled water and thus reduce the quantity of plastic waste.
2024 Targets	Adoption of an indicator to monitor the presence of water-saving devices.
Results expected in 2024	• Overview of plumbing and sanitary installations in the University's toilets • Measurement and publication of data on the UniTrento Sostenibile page of the impact (in %) of tap water saving devices in UniTrento toilets (by 30/6/2024)
SUSTAINABLE MOBILITY	
Current situation	The University is progressively renewing its car fleet. Up to now, six fossil fuel vehicles have been replaced with four full-electric cars and two hybrid cars. A tender procedure has been conducted for the construction of charging points in some university car parks. This is a pilot project involving 3 locations that may be adopted for other locations if resources are available. In 2022, the role of University Mobility Manager was introduced and in 2023 a questionnaire was submitted to the entire university community to find information on home-work commutes. The University has long been committed to sustainable mobility, encouraging students to use public transport through UniTrento Libera Circolazione, which gives them the opportunity to purchase an annual pass at a reduced cost to travel throughout Trentino. The University has not yet adopted a policy for the environmental sustainability of travel for work purposes.

2024 Targets	From 1/1/2024, publication of the results of the processing of the questionnaire on home-work commutes. By 31/12/2024, development of a policy for a more sustainable management of travel for work purposes, including by using information provided by the RUS network. Promotion of low environmental impact mobility (e.g. car sharing and car pooling).
Results expected in 2024	• Valorization of the results of the processing of the questionnaire on home-work commutes • Adoption of a policy for a more sustainable management of travel for work purposes • By 31/12/2024, drafting of an analysis of the pilot project concerning the installation of e-cars charging points in some university car parks • By 31/8/2024, adoption of an agreement to extend the UniTrento Libera Circolazione opportunity to other members of the university community • Definition of a plan for the creation of secure parking spaces for bicycles • Periodical update of information on car sharing and car pooling opportunities on the UniTrento Sostenibile page
2030-2050 Planning	By 2030, plan for the creation of multiple charging points for cars and bikes in all university car parks.

▪ Buildings and procedures:

CONSUMPTION MONITORING SYSTEMS	
Current situation	In construction, sustainability is essential from the early stages of design. Examples of this approach are the new Mesiano University Library, the new Building no. 10 at the Manifatture complex in Rovereto that will welcome CIMeC, the redevelopments or constructions of new classrooms at the Department of Economics and at former CTE building, where lighting has been completely replaced with LED lighting. In 2021 the University carried out a major digitization project for the management of its properties and implemented a structured system for the remote monitoring of consumptions, including through the remote management and control of systems and locations. Having these information in real time will make it possible to intervene in a timely manner to improve the efficiency of the buildings. To this end, 114 electrical and thermal meters and 160 room probes capable of measuring temperature and humidity were installed in various university premises. A considerable portion of the economic resources allocated to the extraordinary maintenance of buildings is directed each year towards the replacement of obsolete and inefficient systems or for building improvements

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	(e.g. heating systems replacement, window replacements, thermal insulation or pipelines).
2024 Targets	Gradually introduce the automatic monitoring of water consumption and thermal and electrical energy at the University.
Results expected in 2024	Annual publication on the page of UniTrento Sostenibile of the indicators of water consumption, thermal energy and electricity for the previous year.
2030-2050 Planning	In view of the 2030 goals, by 31/12/2026, full automation of the monitoring of water consumption and thermal and electrical energy at the University.
GREEN PROCUREMENT	
Current situation	UniTrento is reducing paper consumption and preparing a roadmap for the dematerialisation of communications within the University. UniTrento only uses recycled paper. All items sold on the University's online shop with the University brand were selected based on sustainability criteria. The selected products meet the minimum environmental criteria (MEC) requirements and in many cases also meet other more restrictive requirements such as those for the eveVEGAN, Ecocert Greenlife or OEKO-TEX certifications.
2024 Targets	Verify or implement a uniform sustainable purchasing policy at the University level. Introduce from 1/1/2024 a paper purchase indicator at the University level (per capita consumption) for annual comparisons.
Results expected in 2024	Only print this Plan where necessary. Speed up the works for the dematerialisation of communications within the University to further reduce paper consumption. Calculate and report from 1/1/2024 a paper purchase indicator at the University level (per capita consumption) for annual comparisons.
2030-2050 Planning	-

- Communication and culture of sustainability

SUSTAINABILITY COMMUNICATION	
Current situation	A communication campaign entitled #soloquantoserve has been launched to raise awareness among the university community, through posters and stickers, on the sustainable use of resources.
2024 Targets	Fully implement the #soloquantoserve campaign. Introduce a scientific productivity indicator on the theme of environmental sustainability. Define a communication project on environmental sustainability in the University, and on environmental sustainability education. Monitor the perception of the improvements by the community following the implementation of the environmental sustainability actions included in the Plan.
Results expected in 2024	• Organisation of an event (to be replicated every year) on environmental sustainability at the University, that provides the opportunity for the community to submit proposals on environmental sustainability. • Publication of scientific papers on the subject of sustainability, particularly on the initiatives implemented by UniTrento.

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	• By 31/3/2024, publication on UniTrento Sostenibile of the scientific productivity indicator on the theme of environmental sustainability. • Monitoring of the improvement perception by the community following the implementation of the environmental sustainability actions included in the Plan.
2030-2050 Planning	-

ACADEMIC STUDY	
Current situation	The current offer of courses on environmental sustainability aspects needs greater visibility.
2024 Targets	Identify a criterion to define the "sustainability" of the content of a course or a programme, taking advantage of the existence of an Education Working Group at the Green Office for aspects that are directly or indirectly connected to the environment. Develop a content indicator, taking into account that the results it provides can be the sum of partially sustainable content. Involve the faculty members in a self-assessment of their teaching for the purpose of calculating the indicator. In collaboration with the relevant bodies, consider the opportunity to introduce new modules on environmental sustainability (from general principles to specific aspects, such as climate) that can be chosen by students from various discipline areas.
Results expected in 2024	Quantify the presence of environmental sustainability in the offer of courses of the University and evaluate its possible strengthening (30/6/2024).
2030-2050 Planning	-

■ Health and Well-Being

INDOOR AIR QUALITY	
Current situation	Indoor CO_2 measurements were carried out in university classrooms at UniTrento. The data highlighted the importance of optimized air management. Even now that the covid-19 pandemic is over, the CO_2 parameter is a useful indicator, as an excessive accumulation of CO_2 can lead to a drop in students' attention during classes.
2024 Targets	By 2024, explore the opportunity to measure other indoor air pollutants.
Results expected in 2024	Adopt strategies that make it possible, where necessary, to maintain acceptable CO_2 concentrations on the basis of the above analyses.
2030-2050 Planning	-

WORKING TIME AND WORK-LIFE BALANCE	
Current situation	Aspects of working time fall within the Positive Action Plan that has provided for some actions in this regard. Here, we are focusing on another aspect, that is lunch breaks, for which there are no useful indicators to monitor the improvements introduced, including in terms of environmental impact.
2024 Targets	Enhance the work of the Food Working Group of the Green Office, to pursue the following goals by the end of the year, in line with existing contracts with service providers: - improve the menus according to criteria of greater sustainability (including "km0", local products). - Increase the information available to users about the consequences of the food choices offered by the University. - Promote actions to reduce food waste. - Define a strategy for future contracts with a view to greater sustainability.
Results expected in 2024	The results will depend on the boundaries established by the contracts in place.
2030-2050 Planning	-

For 2024 the following cross-cutting objectives must also be considered:

- definition and approval of a Green Office + Working Groups regulations (31/3/2024);
- analysis of the objectives and results of the previous Environmental Sustainability Plans, in view of drawing up the three-year Environmental Sustainability Plan 2025-2027 (30/6/2024);
- definition of a new structure for environmental sustainability reports starting with the 2023 version (29/2/2024);
- publication and periodical update on the UniTrento Sustainable website of the observations, proposals and responses regarding the transitory 2024 Environmental Sustainability Plan and its developments (from January 2024);
- definition of workflows for the management of data that are useful for the annual environmental sustainability report and for the functional monitoring of future Environmental Sustainability Plans (31/3/2024);
- exact definition, in the 2025-2027 Environmental Sustainability Plan, based on the 2024 Plan, for each of the macro sectors, of objectives, deadlines, timing and monitoring methods;
- analysis of the reliability of environmental sustainability rankings by university, in order to update the strategy of UniTrento in terms of participation.