

# SUSTAINABLE DEVELOPMENT GOALS

## REPORT 2023



# INTRODUCTION

If you want to assess the meaning of a task in an organisation, then a look at the governance structure is a good place to start. At Freie Universität, the topic of sustainability is anchored in two parts of the leadership team of Freie Universität Berlin. The Provost is responsible for the sustainability management of the university, and the First Vice-President, who is also the deputy of the President, is in charge of strategic questions in the context of sustainability and integrating it with the other guiding principles of the university. With this dual responsibility, the university expresses that sustainable development is both a leadership and an integration task.

According to the results of a survey conducted in 2021, 42 percent of the approximately 1,800 research projects at our university address at least one global sustainability goal. Twelve percent even do so in an interdisciplinary manner focused on sustainable development. Furthermore, 16 percent of the over 4,500 courses were sustainability-oriented seminars and lecture courses. We consider the topic of sustainability to be a strategic one not only because of its relevance in terms of content and its urgency, but also since it has a big potential to integrate the different parts of the university. There is hardly any other topic that creates such broad and diverse opportunities for intersectoral cooperation across the entire university. Beyond research and teaching, this is particularly evident in the ideas and innovation management system and the environmental management system in accordance with EMAS.

For more than 20 years, Freie Universität Berlin has been addressing the question of how to make its own institution energy efficient and more sustainable. It has developed a sustainability management system addressing the entire university in its various facets, starting with an energy management system, then adding a certified environmental management system. A wide variety of climate protection and sustainability goals, programs, and instruments have been implemented during this time. The entire process was one of step-by-step development and also the result of an institutional learning process.

The Agenda 2030 for Sustainable Development is based on the inextricably linked nature of the 17 Sustainable Development Goals. For Freie Universität, it is crucial to consider the SDGs as an integral whole as well as in their interconnected and reciprocal linkages. This also applies to this report: it takes a look at the individual SDGs, but the focus remains on the overarching activities and ties at Freie Universität Berlin. The following overview provides a summary of these activities. At the same time, it illustrates how diverse and deeply anchored the various sustainability dimensions have become in all areas of the university.



## END POVERTY IN ALL ITS FORMS EVERYWHERE



Freie Universität is committed to equal access to education. Students without resources or with few resources of their own can receive financial support through the Federal Training Assistance Act (Bundesausbildungsförderungsgesetz, Bafög) and the Bafög counseling service of the Studierendenwerk Berlin.

The diversity concept of Freie Universität adopted in 2021 focuses on social inequality as a key issue. Social status is determined above all by socio-

economic factors such as family origin and income. One of Freie Universität's goals is to be a teaching, learning, and working environment that reduces barriers to access as a result of social status. Freie Universität offers workshops and counselling in the context of diversity and anti-discrimination and has corresponding complaints offices.

As part of its global responsibility, Freie Universität supports refugee students and researchers in continuing their studies and research, for instance by offering language and preparatory courses. The nationwide network Academics in Solidarity (AiS) connects these individuals with colleagues and thus also seeks to open up long-term perspectives on the academic job market.

In March 2023 the Poverty and Health Congress took place in the Henry Ford Building of Freie Universität Berlin, where actors from politics, science, health care, practice and self-help exchange ideas on topics of health inequality.

### SPOTLIGHT RESEARCH

The focus *Sustainable development and socio-economic inequalities* as part of the *TrAndeS* research project, which analyzes the relationship between social inequalities and sustainable development in the Andean region, studies in what way the measures financed by the State contribute to the reduction of poverty, to social inequalities, or to the increase in material and immaterial welfare.

### SPOTLIGHT TEACHING

The seminar *Practical Philosophy, especially Political Philosophy, Moral Philosophy and Business Ethics* of the Institute of Philosophy focuses on Theories of distributive justice, climate justice and climate ethics, as well as poverty measurement and poverty responsibility from the perspective of philosophy.



## END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION, AND PROMOTE SUSTAINABLE AGRICULTURE

The state-supported Studierendenwerk Berlin provides healthy, fresh, and inexpensive food for students and staff at eight cafeterias and canteens at Freie Universität. The canteens offer various meals with low climate impact and provide completely vegetarian and vegan dishes every day.

FU Berlin's student-driven Foodsharing initiative's distribution point FUDsharing reopened after a covid-19 break in May 2022. The so-called Fairteiler is a centrally on campus located space and serves as a meeting place and a forum for learning about food and a sustainable diet. The students pick up left over food from nearby grocery stores, cafés, and bakeries for free and distribute them to anyone interested.



The main dining hall has been certified since 2016 on the basis of the European environmental management system standard EMAS. The Studierendenwerk thereby demonstrates that ecological and economical gastronomy is feasible in large kitchens. In the dining halls, attention is paid to keeping food waste as low as possible. The amount of food waste has been decreasing continuously since 2017 and was below 100 grams per visitor in the main dining hall.

### SPOTLIGHT RESEARCH

A research project from geographical science department is focusing on *Improving food security by integrating climate-resilient crops into maize farming systems for smallholder farmers in Zambia and Namibia TP: Improving water security*. The project is funded from 2023-2025 by the Federal Ministry of Education and Research.

### SPOTLIGHT TEACHING

The topic of the seminar *Geografien der Globalisierung* [Geographies of Globalization] is the diversity of the culinary cultures of Berlin: various flavors, the global network of ingredients, and the migration stories associated with them.

## 3 GOOD HEALTH AND WELL-BEING



## ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

Freie Universität Berlin views the health of its employees as an important resource and is committed to the promotion of health in the workplace through its “FUndament Gesundheit” program. Designing working conditions to be conducive to health and offering a wide range of measures to improve the working climate and motivation among employees are key features of the occupational health management efforts made by Freie Universität Berlin.

The project Healthy Campus – Freie Universität Berlin: Gesund studieren [Study in Good Health] focuses on the health of the university’s students. Its goal is to promote well-being during their studies through targeted measures for prevention and health promotion.



New support points for mental well-being with trained psychologists were set up in 2023. These decentralized points of contact promote mental health and provide first aid counseling for all kind of mental problems in daily life learning and working.

The University Sports Center is offering several activities to strengthen the health and well-being of university members. UniSport @Home class keeps staff and students moving even while working remotely. On top on that a broad range of indoor and outdoor sports activities is offered as well.

### SPOTLIGHT RESEARCH

*#1Health-PREVENT* is a research project about One Health interventions to prevent the zoonotic spread of antibiotic-resistant pathogens. It is conducted by a consortium where the FU Department of Veterinary Medicine is involved in studies on the impact of biocides and antibiotic steward-ship programs on the spread of multidrug-resistant pathogens in small animal medicine.

### SPOTLIGHT TEACHING

The seminar *Gender and health* offered by the Margherita von Brentano Center for gender studies tackles questions around the connection between health and gender. The course focuses on self-reflection to make normative assumptions transparent and learn how to use appreciative communication and be aware of equal participation of genders.

## 4 QUALITY EDUCATION



# ENSURE INCLUSIVE AND QUALITY EDUCATION FOR ALL AND PROMOTE LIFELONG LEARNING



Since the 2016 summer semester, the Sustainability and Energy Management Unit has been evaluating all courses in order to map how many of them address sustainability. The survey is based on the course titles and descriptions from Freie Universität's course catalog in combination with criteria for courses related to or focusing on sustainability. The 17 SDGs form the basis of these criteria. The evaluation of the 2021/22 winter semester shows that 725 (16.1 percent) of the 4,507 surveyed courses relate to sustainability, of which 203 (4.5 percent) focus on sustainability in an interdisciplinary manner.

Within the General Professional Skills Area (ABV) on bachelor-level elective courses are offered to improve professional and personal skills. The ABV currently comprises eight Competency Areas and includes project-oriented modules based on principles of education for sustainable development (ESD) (spotlight see below).

The FUB-ContinuEd continuing education program provides high-quality, hands-on certificate courses for people at all stages of life and of professional backgrounds. The course offers and formats have been diversifying and increasingly respond to global societal challenges.

Dahlem Center for Academic Teaching (DCAT) offers a wide range of workshops, individual coaching and an optional certificate to teaching staff to foster their personal and professional skills in the classroom. This includes design thinking, agile teaching, gender & diversity and sustainability teaching and learning.

### SPOTLIGHT RESEARCH

In October 2022, the BMBF (state-funded) project *Cultures of Sustainability at Higher Education Institutions (HEIs)* started as a joint research collaboration between five German HEIs, including Freie Universität. The project's aim is to identify key entry points, success factors, hurdles and future potentials for HEIs to develop a "culture of sustainability".

### SPOTLIGHT TEACHING

The seminar *Political educational work in the context of global justice* is offered in collaboration with a Berlin-based NGO EPIZ a center for global citizenship education. Students deal with concepts of political education in the context of global justice issues and create educational materials.

# COURSES SORTET ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS, 2021





## Highlight: Sustainability Days

Freie Universität Berlin annually hosts the Hochschultage Nachhaltigkeit & Klimaschutz (University Days for Sustainability and Climate Protection). This week-long event, organized by SUSTAIN IT!, offers diverse activities. From clothing swaps and food sharing to upcycling workshops, discussions, films, interactive events, and exhibitions, the range of activities allows active participation and encourages creative input from attendees. This initiative showcases the university's commitment to sustainability, providing an engaging platform for students, staff and local residents to explore eco-friendly practices and innovative solutions.

## 5 GENDER EQUALITY



# ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

Gender equity, anti-discrimination, equal opportunities, and family friendliness are overarching goals that Freie Universität has been committed to self-critically reflecting on and dismantling for decades. This is most recently expressed in the “Gender Equity Strategy and Action Plan 2021-2026”, which includes regulations, self-imposed policies, goals, benchmarks and measures for action. Many advising and training programs for employees and students are additionally implemented since then.



Based on the recommendations of a cross-status working group, the President's Office adopted in 2022 a regulation to using inclusive, gender-neutral language.

The Toolbox for Gender & Diversity in Teaching of the Margherita von Brentano Center for Gender Studies helps to implement gender- and diversity-sensitive teaching and language.

The Dual Career & Family Service advises employees and students with family responsibilities on how to reconcile work and family life, and offers a special service for dual-career couples to support the life partners of newly appointed professors as they begin their careers in Berlin.

The success of the many measures to achieve gender equality, diversity, and equal opportunities is reflected in the TOTAL E-QUALITY Award, which Freie Universität Berlin has received for more than 20 years, and since 2017 also with the additional award for diversity.

### SPOTLIGHT RESEARCH

*ERC-2022-COG - DEMFAM: Democratising the Family? Gender Equality, Parental Rights, and Child Welfare in Contemporary History* studies fundamental changes in gender and care relations from 1945 to the present. Exploring conflicts around democracy, equality, and diversity, it is an essential contribution to the research field of global gender history.

### SPOTLIGHT TEACHING

Diversity Creates Science - Science Creates Diversity. Gesellschaftliche Herausforderungen im Blick der Gender- und Diversityforschung in MINT (Societal challenges in the view of gender and diversity research in STEM) is an interdisciplinary lecture series of the STEM departments at Freie Universität. Critical-reflexive analyses of gender and diversity research on STEM and perspectives for a science illustrate that STEM subjects are not "cultures of no culture".

## 6 CLEAN WATER AND SANITATION



### ENSURE ACCESS TO WATER AND SANITATION FOR ALL

Freie Universität introduced water controlling and management for its operations back in 2004, which led to an impressive reduction in water consumption of around one-third within five years. Until 2014, consumption remained more or less stable. Between 2019 and 2022, water consumption fell by a further 30 percent, mainly because of the pandemic.

Furthermore, Freie Universität Berlin has built special infiltration and cistern systems at various locations so that precipitation can seep into the ground or be collected and used for watering the green spaces on campus.

Wastewater or sewage from Freie Universität Berlin is sampled and discharged into the sewage system of the Berliner Wasserbetriebe in accordance with legal requirements. It is then thoroughly processed in water treatment facilities.

Drinking water is available in every building and without charge to all members of the university.



On the occasion of the United Nations World Water Day, the nationwide association "a tip:tap" honoured two initiatives of Freie Universität Berlin for their exemplary commitment to free access to tap water. They received the "#pipewaterfriendly" award in 2023. The GreenFUBib working group and SUSTAIN IT! raises awareness among pupils, teachers, students, library visitors, neighbours and employees about drinking tap water from the tap through their educational commitment.

#### SPOTLIGHT RESEARCH

The joint project *WIRE: Water storage in the Angolan-Namibian lishana system: Resource management and adaptation to climate change* of the Department of Applied Physical Geography, Environmental Hydrology and Resource Management aims to develop measures to increase the storage capacity of the sinks in the lishana system and thus water availability, taking climate change into account.

#### SPOTLIGHT TEACHING

The seminar *Introduction to climate and hydrogeography* of the Institute of Geographical Science approaches the basics of climate and hydrogeography, especially the technical terminology. It teaches global interrelationships of the climate system including the interaction with the oceans, the general circulation of the atmosphere and elements of the hydrological cycle.

## 7 AFFORDABLE AND CLEAN ENERGY



## ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE, AND MODERN ENERGY FOR ALL



Freie Universität is continuing on its path to achieve climate neutrality by 2025. The four combined heat and power plants (total 715 kW<sub>el</sub>) reduce demand through efficient use of energy. Nine photovoltaic (PV) systems with a capacity of 671 kW<sub>p</sub> are in operation. Two additional plants with have been erected and the construction of 13 additional PV plants with a capacity of 1,200 kW<sub>p</sub> is scheduled. The annual energy production of the photovoltaic systems should thus be increased from about 600 MWh to about

1,800 MWh, which will be fed into the university's power supply.

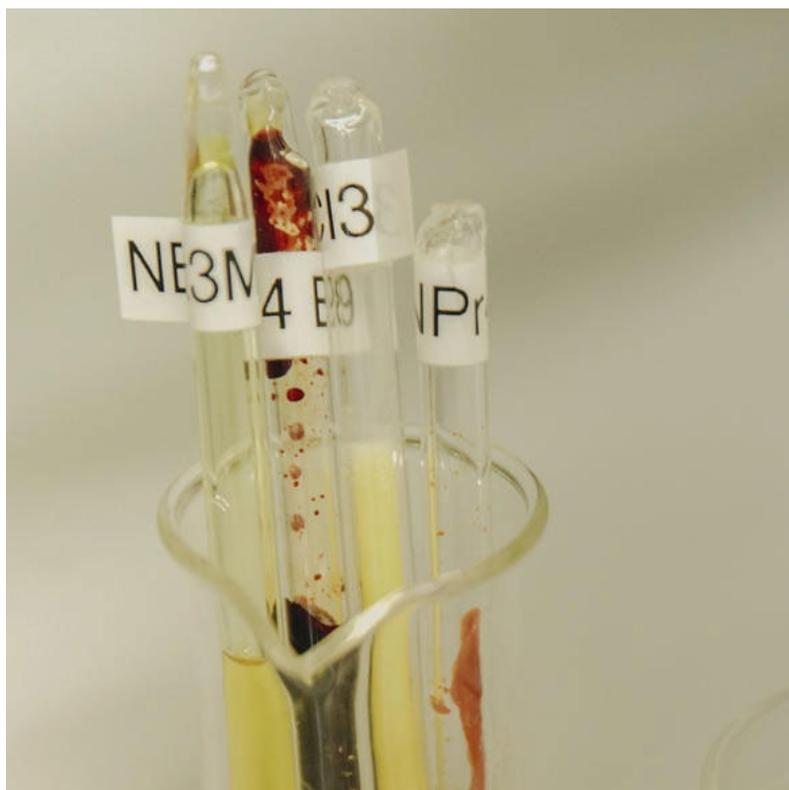
Programs and measures to improve energy efficiency are an important part of the campus management's energy strategy. Through a combination of various technical, structural, organizational and behavioral measures, the university succeeded in reducing its energy consumption by more than 30 percent between 2001 and 2022, despite an increase in heated floor space. This saves about 49 million kilowatt hours annually compared to the baseline year. The goal of saving a further 10 percent of energy consumption by 2025 compared to 2019 has already been half achieved.

### SPOTLIGHT RESEARCH

*Carbon Think.* The Working Group Geoecology is investigating the potential of organic residues and waste for the purpose of closing the cycle and saving fossil resources. The focus is on the production of biochar from biomass. The waste heat from the production process will be used to replace heat from fossil fuels.

### SPOTLIGHT TEACHING

The seminar *Artificial Photosynthesis - Science for the Energy Transition* addresses the sustainable production of fuels from water and CO<sub>2</sub> energetically driven by solar energy and explains how artificial photosynthesis will contribute to mitigation of global climate change.



## Highlight: Sebastian Hasenstab-Riedel Awarded Inaugural Roesky Prize

The Gesellschaft Deutscher Chemiker (German Chemical Society) honored Professor Dr. Sebastian Hasenstab-Riedel from Freie Universität Berlin with the first Christel and Herbert W. Roesky Award. He receives the prize for his outstanding achievements in the field of transition and main group chemistry as well as modern molecular spectroscopy under cryogenic conditions. His groundbreaking research extends to applications in modern plastics and innovative greenhouse gas substitutes.

## 8 DECENT WORK AND ECONOMIC GROWTH



## PROMOTE INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, EMPLOYMENT, AND DECENT WORK FOR ALL

More than 5,000 people are employed at the Freie Universität: from professors and academic staff to administrative staff, building technicians and gardeners. As an employer, the FU sees it as its duty to support its employees and to create a favourable working environment. In the spirit of lifelong learning, the Continuing Education Centre offers a comprehensive range of training courses.

Freie Universität is subject to the legal requirements for the fair and non-discriminatory equal treatment of all employees and endorses these out of its own conviction. This naturally includes equal pay for men and women. When employees, including student employees, have questions and conflicts, the staff councils represent them vis-à-vis Freie Universität as employer.

The compatibility of career and family plays a major role at Freie Universität and is actively promoted through various stakeholders and activities. The Dual Career & Family Service at Freie Universität is available to advise employees and students. It offers information on childcare, parental allowance and maternity leave. There are also several parent-child rooms on the campuses, which can be used as places of retreat and childcare

Freie Universität Berlin offers numerous opportunities to learn a profession or gain professional experience. In addition to the traditional vocational training, school pupils, students, trainees, and young professionals can gather valuable professional experience and knowledge during an internship.

### SPOTLIGHT RESEARCH

The studies conducted at the *Research Center of Sustainability "FFN"* on sustainable economic policies and the green economy cover the various competing concepts, their objectives, instruments and their effects on the environment and on employment. The study of these covers both international comparisons of the various concepts as well as the analysis of concrete individual cases, such as certain policy instruments or policy mixes in specific sectors.

### SPOTLIGHT TEACHING

The course *Nachhaltigkeit managen – Gemeinwohlorientierte Geschäftsmodelle [Managing sustainability - business models for the common good]* deals with the question how innovations can contribute to solving socio-ecological challenges. Students analyse business models with a focus on sustainability aspects and recognise innovation potential and develop innovative, sustainable solutions.



## BUILD RESILIENT INFRASTRUCTURE, PROMOTE SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

The idea and innovation management system at Freie Universität Berlin invests in new targeted solutions and approaches to specifically promote sustainability and climate protection at the university.

In 2023 the FUtulist call for proposals promotes, for the third time, innovative ideas of university members that make a direct contribution to the seven objectives of the climate emergency declaration of Freie Universität. Furthermore, since 2022, students have been able to make their contribution to a more sustainable campus life through an annual ideas competition and, if successful, participate in a program to strengthen their entrepreneurial skills. Living Labs additionally support research and practice communities for sustainable development that are implemented on campus.



### SPOTLIGHT RESEARCH

The collaborative research project *GreenCHEM* with the Department of Business Informatics as well as the Digital Entrepreneurship Hub of Freie Universität Berlin, aims to create a self-sustaining transfer ecosystem for research and practice in Berlin that combines the twelve principles of Green Chemistry, in particular technical innovation based on relevant principles of circular economy, renewable resources and the avoidance of toxic and fossil substances.

### SPOTLIGHT TEACHING

The seminar *Innovation economics: understanding transitions towards sustainability* aims presenting the Technological Innovation Systems functional approach and the regime dimensions of Multi-Level Perspective for analysing issues in sustainability transitions, such as a future hydrogen-based gas distribution grid.



## Highlight: Ideas and Innovation Management

Freie Universität Berlin's Ideas and Innovation Management, aligned with the seven goals of the Climate Emergency Declaration, is driving sustainable solutions in research, education, and campus management. Through initiatives like FUturist, an open call for ideas, student competitions, and support for Living Labs, the university nurtures individual commitment for sustainable development. Workshops and consultations empower staff and students to apply innovative methods in their daily activities. A yearly calendar about relevant funding programs puts the right information in the right place at the right time. Frequent events such as the FUturist Awarding engage the community in sustainable dialogues. With a focus on empowering individuals, Freie Universität Berlin is catalyzing innovation to meet the challenges of a sustainable future.



## REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES



For the past years, Freie Universität has been increasingly addressing the issue of diversity. In the Diversity and Antidiscrimination Office advises and supports the university management in the strategic development of diversity issues. The office overarching goal is to ensure sustainable structural equity in the university. In June 2021, the Executive Board of Freie Universität adopted a Diversity Strategy and Action Plan, which defines an associated strategy until 2023. It sets out 27 specific goals and 51 specific measures that will contribute to meeting them.

If they personally experience discrimination or unfair treatment, many counseling services are available for all members of the university, including students, doctoral candidates, professors, employees, and adjunct lecturers.

Freie Universität supports refugee students and scientist continuing their studies and research. The nationwide network Academics in Solidarity (AiS) connects these individuals with colleagues and thus also seeks to open up long-term perspectives on the academic job market.

### SPOTLIGHT RESEARCH

*WealthTalks: The (re-)production of wealth inequality in everyday talk* offers a novel perspective on the production and reproduction of wealth by examining how ordinary citizens discuss wealth and in-equality in everyday conversations. The project is based on the assumption that everyday talk reproduces grand narratives of meritocracy and is, thus, prone to make the accumulation of wealth seem desirable and wealth inequality unavoidable.

### SPOTLIGHT TEACHING

The new master's program at the Institute of Earth Sciences *Geographies of Global Inequalities* focuses on global inequalities from a relational perspective. It recognizes that economic and societal privilege or disadvantage in a globalized world cannot be defined by binary divisions. Instead, it is a complex interplay — spatially fragmented, relational and unevenly distributed, often existing in close spatial proximity.



## MAKE CITIES AND COMMUNITIES INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

At Freie Universität, most buildings are accessible to people with disabilities. The university campus offers places for recreation, sports, and gardening. The public campus is safe and green. It offers space for social engagement, for example during “Sustainability Days” or in the community garden “Blätterlaube”. Three-quarters of the grounds are unbuilt plots and for the most part used as green spaces.



The “Blooming Campus” biodiversity project aims to significantly increase biodiversity on campus. Beehives and nesting boxes are just as much a part of the biodiversity program as the green roofs. The green roofs are able to store rainwater and improve the microclimate in the surrounding area through evaporation.

Employees and students commute to the university over 80% by public transportation and bicycle. Only 16% use cars. In 2023, 7 shared electric mobility hubs opened on campus. The bicycle self-help workshop “FU-Rad” offers weekly repair workshops. 50% of the FU vehicle fleet has been converted to electric mobility.

The university's dining halls offer a wide variety of vegetarian dishes. The foodsharing initiative “FUDsharing” provides students with food that can no longer be sold by local grocery stores, donated to the initiative.

### SPOTLIGHT RESEARCH

The *Urban Climate and Urban Measurement Network Working Group* of the Institute of Meteorology at the Department of Earth Sciences is conducting targeted research on sustainable cities, in particular on heat resilience and extreme weather events in urban areas. For this purpose, a measurement network was established to evaluate the climate in cities at the micro level.

### SPOTLIGHT TEACHING

The seminar *Wie lassen sich die Herausforderungen für künftige Mobilitätsanwendungen lösen?* [How can the challenges for future mobility applications be modeled and solved?] aims to address cutting-edge modeling and algorithmic challenges for future mobility applications. This is done by combining concepts from three disciplines: Vehicle Routing Problem, Computational Social Choice, and Ethics.



## Highlight: Mobility Survey

In a mobility survey conducted at Freie Universität Berlin from January to February 2022, approximately 6,000 or around 13 percent of all university members participated, offering valuable insights into commuting habits and preferences. The survey aimed to take stock of mobility to and from the university, as well as between campuses and to identify specific needs and desires for their more climate-friendly and sustainable mobility. Notably, 67% of employees and students predominantly use public transport, showcasing a higher usage rate compared to the citywide average of 27%. Conversely, only 14% rely on private cars.. The data will inform a comprehensive mobility concept, reflecting Freie Universität's ongoing commitment to environmental sustainability.



## ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

Sustainable procurement has become increasingly important at Freie Universität Berlin in recent years. Freie Universität integrate sustainability criteria such as energy efficiency, avoidance of material waste, toxic substances, good working conditions in contracts with suppliers. In 2022, Central Purchasing has designed a sustainability strategy to align purchasing even more towards sustainability. Since 2022, Freie Universität has a new catering supplier who focuses on sustainability aspects.

Waste management at Freie Universität follows the basic principle of waste avoidance, followed by re-use, then waste disposal. Recycling of recyclable materials is of great importance. Most of the waste generated is fed into the recycling loop. The residual waste is then recycled into energy by the municipal waste disposal company through incineration, so that a total of over 95 percent of the university's waste is reused.



On the digital platform FUndgrube, furniture, equipment, and other university items are offered for re-use by and for all members of Freie Universität. These can be acquired at little or no cost. In this way, resources can be conserved, and usable items can be used longer. In 2022, the Futurist project “FUNDGRUBE: RE-DISCOVER –RE-CONNECT– RE-CYCLE” aimed to make the FUndgrube even more visible at the FU.

### SPOTLIGHT RESEARCH

With the project *Die Frustule der Diatomeen als naturgestaltete Bausteine in photonischen Anwendungen* [The frustules of diatoms as naturally designed building blocks in photonic applications], the Department of Physics explores the use of diatom frustules as nanostructures and nanostructured templates in optical elements and optoelectronic devices with the aim to improve the device performance, as well as to optimize the device architecture.

### SPOTLIGHT TEACHING

The course *Nachhaltigkeit leben, Nachhaltigkeit kommunizieren – wie gehen Unternehmen damit um?* [Living sustainability, communicating sustainability – how do companies deal with this?], offered by the School of Business & Economics analyzes how companies deal with the issue of sustainability. One focus is the development of an orientation framework that can be used to illuminate and characterize a company's sustainability position.



## Highlight: Event N Toolbox

Freie Universität Berlin pioneers sustainable event management through the comprehensive Event N Toolbox, a pragmatic guide developed by the university's sustainability initiative, SUSTAIN IT! It equips event organizers with practical strategies for reducing carbon footprints, minimizing resource consumption, and ensuring social equity, all within budget constraints. From workshop, conferences to campus-wide activities, Freie Universität Berlin's approach to events reflects a commitment sustainability and fiscal responsibility, setting a benchmark for sustainable practices in higher education.



## TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

Freie Universität Berlin has a long and intensive history of engagement with climate protection. Through a mix of different programs, measures and incentives, it has succeeded in reducing campus-related electricity and heat consumption by a total of 30.5 percent between 2001 and 2022. Adjusted for the increase in floor space, the reduction was even 35.0 percent. During the same period, Freie University of Berlin was able to decrease its CO<sub>2</sub> emissions by a total of 87.5 percent– by over 88 percent when adjusted for floor space.



In December 2019, Freie Universität became the first German university to declare a climate emergency. This declaration addresses seven subgoals, most notably considering climate protection in all university plans and decisions and striving for climate neutrality by 2025. The strategic options for implementing the Declaration of Climate Emergency have been continuously discussed in the Sustainability and Climate Protection Steering Committee, established in 2020.

### SPOTLIGHT RESEARCH

The *Einstein Research Unit Climate and Water under Change (CliWaC)* is an inter- and transdisciplinary research initiative of the Berlin University Alliance dedicated to investigating water-related risks of climate change in the Berlin-Brandenburg region. CliWaC brings together social and natural science as well as practical expertise from stakeholders to develop mitigation and adaptation measures against climate change impacts.

### SPOTLIGHT TEACHING

The seminar *Content Analytical Research Methods & Climate Change Communication* focuses on the general topic of the climate crisis. It provides an introductory understanding of content analytical approaches as a method in political science and sociology and looks at examples of existing content analytical studies centered on climate change communication.



## Highlight: FUBIC All-Electricity

The “FUBIC” business and innovation center with a focus on natural sciences and technology arises right next to the Freie Universität campus. The all-electricity project is planned as a hub between science and young technology companies. The FUBIC is being built by WISTA-MANAGEMENT GMBH, which is known for its work at the Berlin Adlershof Science and Technology Park. It is funded with 50 million euros from the Joint Task for the Improvement of Regional Economic Structures (GRW). The accompanying research is also fostered by the “EnEff Stadt” (energy efficient cities) funding program of the Federal Ministry of Economics. In the FAE-R joint project, Freie Universität is a research partner with a focus on the involvement of interest groups and social acceptance. The office and laboratory buildings in the technology quarter do not need a single smokestack because the energy to supply the buildings is provided exclusively by electricity from renewable sources. This innovative district concept was recently shortlisted for the ODH Award.



## CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS, AND MARINE RESOURCES

To safeguard water resources, Freie Universität employs an intricate waste management system. Water-soluble environmentally harmful waste, such as laboratory chemicals, is appropriately disposed by Freie Universität's Special Waste Disposal team.

Freie Universität utilizes the electronic hazardous substances register "CLAKS" to maintain detailed records of hazardous substances inventory. Due to the careful management, including regular checks and protective measures, potential negative impacts on water, soil, and air have been mitigated.

Studierendenwerk Berlin adheres to stringent ecological standards when sourcing fish for all canteens of Freie Universität. Catch rates are regulated to sustain fish populations, and efforts are made to minimize by catch and habitat damage caused by fishing gear.

The workshop "Discovering microplastics: An exploration tour in the Botanical Garden" educates children about microplastics, their origins and their environmental impacts. The "Schools@University for Sustainability + Climate Protection" program hosts this initiative.



### SPOTLIGHT RESEARCH

Freie Universität biologist Salah Amasheh is researching protein compounds that protect corals. Collaborating with researchers from the University of Jordan, he investigates stony corals' resistance to heat stress and environmental pollution at the molecular and functional level, exploring regional and type variations. This research aims to contribute significantly to the conservation of diverse species in the region.

### SPOTLIGHT TEACHING

The course *An ocean of trash* part of the Competence Area Sustainable Development in collaboration with the university's Wannsee Watersports Center focuses on developing local strategies to prevent ocean and water pollution. In a week-long design sprint, students were tasked with developing projects aligned with the United Nations' Honolulu Strategy.



## PROTECT, RESTORE, AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, HALT AND REVERSE LAND DEGRADATION, AND HALT BIODIVERSITY LOSS

Freie Universität Berlin has declared 2024 as the “Year of Biodiversity.”, intensifying its focus on biodiversity in teaching and research to raise awareness and support preservation efforts. . Joining the Nature Positive Universities alliance, the university commits to becoming nature-positive, restoring species and ecosystems harmed by its activities across teaching, research, operations, and supply chains. Annual status reports on campus biodiversity will be provided.



The Botanic Garden and Botanical Museum Berlin, a central facility of Freie Universität, stands out globally not only due to size but also its diverse plants collection. It forms Germany’s largest university natural history research collection, including around four million specimens in the herbarium and almost 20,000 species in the garden and greenhouses, along with the Dahlem Seed Bank and the DNA Bank. The Garden digitally links these resources, providing valuable insights. The Museum, unique in Central Europe, contributes to national and

international biodiversity programs and university research and teaching at Freie Universität.

In 2023 “FUtulist” initiative funded five projects increasing biodiversity and strengthening species on campus. Additionally, 13 workshops related to SDG 15 were held during the “Schools@University for Sustainability + Climate Protection” program.

Dr. Manfred Forstreuter's research in the "climate forest", investigates the impact of drought and extreme weather events on over 1600 copper beeches in the Berlin Forests "Grünwald." The team explores whether certain 'provenances' among copper beeches are better adapted to extreme climatic conditions, aiding plant protection against advancing climate change.



Since 2019, Freie Universität has had a Coordination Office for Nature, Environment, and Sustainability Education (NUN), making nature, environmental and sustainability education accessible to everyone in the district and expanding offerings, often in the "Leafy Green Conope" (Blätterlaube), serving as a green classroom.

Freie Universität Berlin's buildings, nestled within extensive green areas of Steglitz-Zehlendorf, feature over two thirds of the grounds undeveloped, with green roofs

enhancing the local microclimate, providing habitats for insects and birds, and improving various building properties, including thermal insulation and heat shielding.

### SPOTLIGHT RESEARCH

The *Berlin-Brandenburg Institute for Biodiversity Research (BBIB)* on the Berlin-Dahlem campus bridges interdisciplinary spatial scales and biological systems that are usually considered in isolation in biodiversity research.

### SPOTLIGHT TEACHING

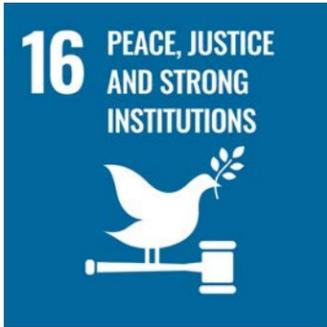
The Master's program *Biodiversity, Evolution, and Ecology* equips students with knowledge and skills for careers in biodiversity and ecological research, focusing effective data gathering, analysis, and interpretation, offering unique training opportunities.



## Highlight: Biodiversity

In 2024, Freie Universität Berlin highlights biodiversity activities at the university as part of the 'Year of Biodiversity' initiative. Through rigorous academic pursuits, the university aligns research and teaching methods to bolster biodiversity. Initiatives like 'Blühender Campus' (Blooming Campus) transform the green spaces on campus into ecological innovation hubs, complementing the university's commitment to the global 'Nature Positive Universities' alliance. By intensifying ties with this alliance, practical strategies for biodiversity preservation are developed and actively implemented. This comprehensive approach reflects the university's commitment to environmental stewardship and nurturing environmentally conscious scholars and professionals.

Additionally, Dr. Sophie Lokatis, former head of the 'Blühender Campus' initiative, received the prestigious Berlin Nature Conservation Award 2023 for leading the transformation of 10 hectares of campus into wildlife-friendly areas. This initiative engaged students, staff, and the community, enhancing urban biodiversity in alignment with Sustainable Development Goal 15: Life on Land.



## PROMOTE JUST, PEACEFUL, AND INCLUSIVE SOCIETIES

Freie Universität embraces a comprehensive institutional approach, integrating sustainability management across the university. Participatory methods such as working groups, educational programs, and idea competitions provide diverse engagement opportunities for various stakeholder groups.

The Ideas and Innovations Management regularly launches calls for proposals for innovative project ideas that make a direct contribution to the goals of the university's Climate Emergency Declaration. In 2022 five project teams were funded and implemented their ideas with a focus on campus biodiversity.

Freie Universität has a strong focus on the consequences, causes, and interrelationships of conflicts, migration, and (post-) colonialism in its research projects and course offerings. Corresponding activities can be found in particular in the Peace and Conflict Research Unit as well as at the Sustainability Research Center both based at the Otto Suhr Institute of Political Science and at the Institute for Latin American Studies.



### SPOTLIGHT RESEARCH

The research project *Neuer Lokalismus: Ressource friedlicher Konfliktbearbeitung in Stadt und Land [New Localism: A Resource for Peaceful Conflict Management in Towns and Countryside]* coordinated at the Department for Geosciences delves into peaceful conflict management. It contributes to international peace and conflict research from the perspective of human geography.

### SPOTLIGHT TEACHING

The course *Knowledge Production in and about (Post) Conflict Zones* offered by the Department of Political and Social Sciences provides a critical exploration of how knowledge is produced in and about (post)conflict zones. It focuses on institutions engaged in conflict reporting and their policies (such as Human Rights Watch and the International Crisis Group) along with ethnographies of spaces related to aid and peacebuilding.



## REVITALIZE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT

Following its mission as an international network university, Freie Universität Berlin actively participates in various sustainability-related university networks. For instance, the university joined the international network "Nature Positive Universities" in 2023, established by the UN Biodiversity Conference in Montreal (Canada).

Since 2015 the Sustainability and Energy Management Unit has coordinated the University Alliance for Sustainability (UAS) with Freie Universität Berlin's strategic partner universities. In cooperation with the Alumni Center of FUB the unit hosted a DAAD funded Alumni Workshop on "Innovating for Sustainability: Innovation Management to Advance Carbon Neutrality and Sustainability" for international UAS Alumni in September 2022.



Freie Universität Berlin leads the Sustainability Focus Area in Una Europa, a European university network with a vision to create a European university for exceptional teaching and research. In 2022, the Task Force published the Una Europa Strategy for Sustainability and Climate Protection.

Additionally, Freie Universität is an active member of the International Sustainable Campus Network, holding a seat in the Advisory Committee. Since 2023, FUB supports the strategic development of the network with a Senior Fellow.

### SPOTLIGHT RESEARCH

The research workshop *Socio-ecological transformation in the global countryside: actors, visions, strategies* addressed questions about which actors initiate change processes towards sustainability and democratization, the visions associated with socio-ecological transformation, which strategies they pursue, and which similarities and differences that exist.

### SPOTLIGHT TEACHING

In the course *Global Perspectives on Megatrends and the Role of Think Tanks in International Cooperation* in the Department of Political and Social Sciences students analyze global megatrends that strongly influence different spheres of life at different levels. Examples include climate change and sustainability, digitalization, growing inequalities, and sustainable finance. The seminar is strongly linked to the 17 SDGs.



## Highlight: UNA Europa

Freie Universität Berlin, a key driver within Una Europa, actively shapes the future of higher education. As part of the influential Sustainability Steering Committee (SSC), FU Berlin plays a crucial role in deciding on transformative formats, including Joint Bachelor programs and Micro-credentials. The recent approval of Una.Futura in November 2022 marks a significant milestone, underscoring FU Berlin's leadership in innovative educational formats like hybrid sustainability courses.

Simultaneously, FU Berlin leads the Task Force Sustainability and Climate Protection, driving a comprehensive strategy. Ongoing activities include workshops, networking events, social media campaigns, and collaborative reflection papers for higher education leadership. As Una Europa envisions a European campus transcending borders and disciplines, FU Berlin actively contributes to this transformative journey, fostering collaboration and mobility for students, researchers, faculty, and staff.

## Sustainability Report 2023

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