



**SUS
TAIN
ABILITY
2020 REPORT**

ABOUT FREIE UNIVERSITÄT BERLIN

Students and faculty founded Freie Universität Berlin in 1948 in reaction to the persecution of system-critical students at East Berlin's Universität Unter den Linden. The values of freedom and internationality have shaped Freie Universität's development through the present day. Particularly in light of its founding history, the university firmly embraces its continuing social responsibility regarding democracy, equal opportunity, and diversity.

Freie Universität Berlin enshrined its commitment to sustainable development in all areas of higher education in its first Sustainability Mission Statement, published in 2016. This statement also describes the university's responsibility as an institution. It was the first German university to declare a climate emergency in December 2019, committed itself to consider climate protection in all its decisions and plans and to achieve institutional climate neutrality by 2025. Furthermore, the document states that sustainability and climate protection will be addressed in all curricula.

Freie Universität Berlin has been part of the German Universities Excellence Initiative since 2007.

Since 2019, the Berlin University Alliance, which includes four Berlin partners – Freie Universität Berlin, Humboldt-Universität zu Berlin, Technische Universität Berlin, and Charité Universitätsmedizin Berlin – has been funded as an excellence cluster resulting from the German federal and national state governments' Excellence Strategy Competition.

The university offers a wide spectrum of subjects, ranging from the natural and life sciences to the social sciences and from the humanities to veterinary medicine. More than 150 study programs are available to around 37,000 students. International collaboration plays a crucial role. In 2019, Freie Universität maintained more than 100 partnerships with scientific institutions and five liaison offices worldwide.

International university networks also play an important initiating and networking role for sustainability. Prominent examples include the *University Alliance for Sustainability* (founded by Freie Universität Berlin and its strategic partners in 2015) and the European alliance *Una Europa* (established in 2019).

SUSTAINABILITY REPORT 2020

Freie Universität Berlin

CONTENT

FOREWORD 4

GOVERNANCE 8

TEACHING 20

RESEARCH 32

DIALOGUE 42

CAMPUS 50

NETWORKS 64

WE 70

GOALS 78

APPENDIX

MAKING OUR UNIVERSITY SUSTAINABLE COLLECTIVELY

As we write this preface, nine months of common experience with the COVID-19 pandemic are behind us. The pandemic's impacts on our professional and private lives have been profound and unprecedented, and they will likely shape our future for years to come.

Historical events of this kind leave their mark on scientists' self-conception and on the institutions that sustain them. On the one hand, researchers should become increasingly aware of their societal relevance. On the other hand, such awareness leads to a new form of public discourse on the societal role of research and teaching, forms and quality standards, and the limits

of scientific communication. Scientists and their respective institutions must now face such debates.

Finally, the COVID-19 pandemic revealed that our current times are marked by immense ecological and societal challenges. Our planet's ecological limits are becoming ever more apparent with the worsening climate crisis, the loss of biodiversity, and the extinction of species. Simultaneously, digitalization, virtual communication, renewable energies, autonomously learning systems, and the prospect of synthetically produced "green" energy sources create entirely new possibilities for shaping future civilizations, including

a zero-emissions economy. These are only some of the core issues relevant to addressing global crises. In the end, broader social acceptance will be crucial, and all of academia can work toward this aim. This includes those of us at Freie Universität, and we intend to make a comprehensive and proactive effort to address these issues.

The present report covers 2019, but it reflects our university's long running effort to confront the challenges of sustainable development. Our Declaration of Climate Emergency in 2019 was only possible because we could build on previous efforts to address climate pro-

tection and sustainability. The declaration's sub-goals are challenging, but we will succeed in addressing them collectively. We invite all of you to work toward these aims within the various areas of our university.

*Univ.-Prof. Dr. Günter M. Ziegler, President
Dr.-Ing. Andrea Bör, Provost*



CLIMATE NEUTRALITY BY 2025

Our second sustainability report is being released at a time predominantly shaped by the COVID-19 pandemic. From the sustainability perspective, several interesting questions have emerged in the context of this global crisis. How can countries, societies, and organizations become more resilient in the face of multiple crises? What are the consequences of this opportunity for widespread reflection on lifestyles and consumption patterns, both personally and socially? Do crises make course changes more likely, and how can they contribute to the necessary transformation toward a sustainable future?

While researchers at our university are already tackling these questions, we can also provide answers as

an institution concerning our own area of responsibility. In December 2019, Freie Universität Berlin became the first German university to declare a state of climate emergency. This declaration included a pledge to consider sustainability and climate protection in all decisions and plans and to make the university climate neutral by 2025.

We set these ambitious goals because we have been dealing with climate protection for a long time at Freie Universität. Using a diverse set of instruments and single measures, we have reduced the university's energy consumption by 27 percent over the past two decades and the resulting CO₂ emissions by 80 percent. At first glance, this step toward climate neutrality may

not seem all that significant, but it is. To reach our goal, we must continue to exhaust the potentials of energy efficiency and renewable energies on campus and also address new issues, such as targeting emissions from business trips, related air travel, and sustainable mobility. Climate neutrality will only be achieved when we meet these challenges with innovative solutions using our collective creativity as a university community.

Open dialogue is indispensable to achieve this goal. At the Unit for Sustainability and Energy Management, we will support this process with our ideas and innovation management. If all of us – students, researchers, and administrative staff – think of our uni-

versity as a place of the future, where we experiment with new ideas and take social responsibility, we can look ahead optimistically. You are invited to participate, regardless of your field of work or activity at Freie Universität.

*Andreas Wanke
Head of the Unit for Sustainability
and Energy Management*



DEFINING
RESPONSIBILITIES AND
ENABLING PARTICIPATION

GOVERNANCE

SUSTAINABILITY MANAGEMENT – KEEPING AN EYE ON THE WHOLE INSTITUTION

Freie Universität Berlin has been actively engaged in environmental and climate protection within its own institutional sphere of responsibility for two decades. In 2001, it founded an internal energy management program and developed its activities step by step from a certified environmental management to a holistic sustainability management.

The latter follows the lead of the United Nations' Sustainable Development Goals, passed in 2015. This also led to adjustments in the university's governance structure. Until 2014, energy and environmental management was part of the Department of Engineering and Utilities, which is responsible for the university's campus infrastructure. In 2015, the Sustainability and Energy Management Unit was founded and assigned directly to the Executive Board.

GOVERNANCE

The general responsibility for the university's sustainability management lies with the provost. Since 2019, the Vice President for International Affairs has been responsible for sustainability in research and teaching. With this governance structure, Freie Universität demonstrates that sustainable development is a question of leadership and intergration, addressing the entire university. As early as 2016, the Executive Board passed a Sustainability Mission Statement, which had been drafted in a participatory process. It describes the university's basic stance toward sustainability, setting core goals for different institutional areas.

To devote high importance to the issue of climate protection in the future, as the student plenary demanded in June 2019, Freie Universität founded a Steering Committee for Sustainability and Climate Protection. The vice president responsible for sustainability in research and teaching heads this committee, which includes representatives from all university stakeholder groups. Since the committee started operating in early 2020, it has focused particularly on the Climate Emergency Declaration's most urgent subgoal: making Freie Universität climate neutral by 2025.



THE SUSTAINABILITY AND ENERGY MANAGEMENT UNIT'S TASKS

The Unit for Sustainability and Energy Management, comprising 14 staff members and five student assistants (as of 2021), covers a wide range of sustainability-related tasks. It is responsible for coordinating the field of Sustainable Development within the interdisciplinary study area General Professional Skills Courses (ABV); gathering and controlling energy, water, and waste data; and online energy monitoring. The unit is also in charge of the integrated management system (AGUM) and the corresponding certification process in accordance with the European Union's Eco-Management and Audit Scheme (EMAS). Moreover, it also represents Freie Universität Berlin in several international sustainability networks.

Despite this pooling of various functions, sustainability management remains a cross-sectional task that can only succeed if many university members work together. This is one reason why participatory formats and network activities are indispensable to the development and implementation of our university's sustainability management efforts.

ORGANIZATION & PARTICIPATION

AGUM – OUR WORK SAFETY, HEALTH, AND ENVIRONMENTAL PROTECTION MANAGEMENT SYSTEM

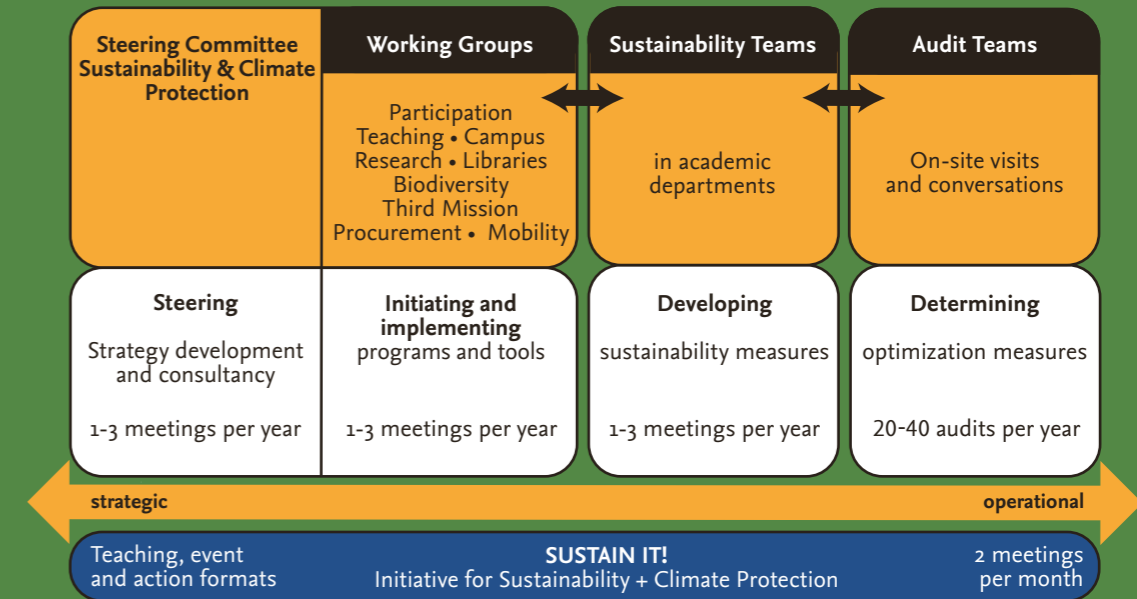
Since 2020, Freie Universität Berlin has pursued work safety, health, and environmental protection with the help of the integrated management system AGUM. We chose this system after a rigorous selection process. It was developed by Universities for Universities in North Rhine-Westphalia in 2010 and is now used by 83 universities nationwide.

AGUM merges all the information and specifications that are relevant to work safety and environmental protection at Freie Universität and adjusts them to correspond with changing legal requirements. Its primary goal is to make complex legal regulations transparent for those who systematically work with them on a day-to-day basis. AGUM also provides users with targeted information and communication instruments. Its main target groups include senior management and staff members with special tasks, such as security, first aid, and fire safety officers.

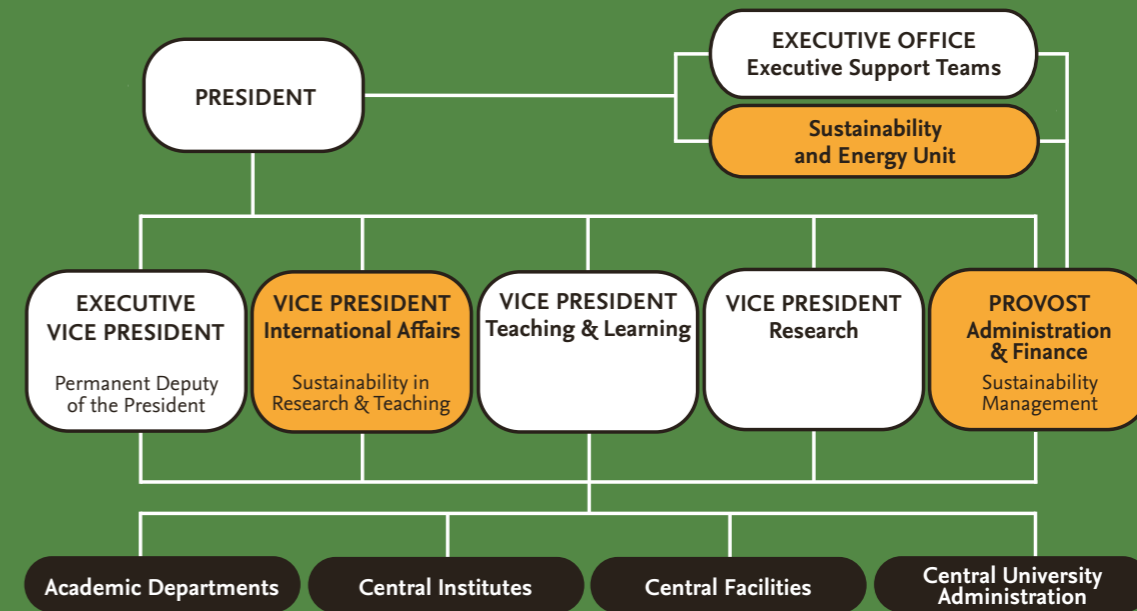
The system is available to all university members as an information platform on the intranet. However, AGUM is also partly a binding regulation. To familiarize those who are most affected by AGUM and receive hints for possible adjustments and optimization, the Sustainability & Energy Management Unit offers introductory workshops to all faculties and administrative branches.

In addition, Freie Universität's environmental management looks to the Eco-Management and Audit Scheme (EMAS) developed by the European Union. The first certification in accordance with EMAS is planned for 2021. This certification is the foundation of a continuous improvement process.

GOVERNANCE AND PARTICIPATION STRUCTURE



ORGANIZATIONAL CHART



THE UNIVERSITY AS A “LIVING LAB”

Sustainability management at Freie Universität Berlin adheres to a whole institution approach. This means embracing the idea of the university as a place where society's future is created. Important impulses for sustainability-oriented activities can follow from the corresponding integration of various university disciplines and areas.

“Living labs” are a key instrument for realizing this integration, as they foster systematic collaboration between research, teaching, and campus management. For example, a joint initiative comprising researchers, students, and employees started the *Blooming Campus* project in 2019 to improve biodiversity on campus, and this project will be further developed in the future.

In the context of a research project at the Faculty of Geosciences, the university also commissioned a feasibility study to examine how organic waste produced by Freie Universität and the district could be used to close cycles. The carbonization of waste produces heat that can be used to heat buildings as well as plant coal for possible soil stabilization and composting. The results from the feasibility study of this negative CO₂ emissions technology were presented to the *Sustainability and Climate Protection Steering Committee* in August 2020.

DECLARATION OF CLIMATE EMERGENCY

Freie Universität Berlin became the first German university to declare a climate emergency in December 2019. This declaration addresses seven subgoals, including considering climate protection in all university plans and decisions and achieving climate neutrality by 2025.

The resolution of the Executive Board also stipulates that sustainability and climate protection should become more integrated into the university's curricula in the future. An ideas and innovation management will play an important role in the resolution's implementation.

CLIMATE EMERGENCY DECLARATION'S ORIGINAL TEXT

A UNIVERSITY'S RESPONSIBILITY FREIE UNIVERSITÄT BERLIN DECLARES CLIMATE EMERGENCY

Freie Universität Berlin has declared a climate emergency. Scientific findings on the causes of climate change and related risks are fundamental to developing political counterstrategies. Scientific contributions to this crucial global challenge must achieve more resonance in politics and society.

Universities have a special responsibility in this context. In line with the German Rector's Conference, we see universities as “living labs”, which not only generate new scientific findings and communicate these to society, but also develop exemplary solutions within their areas of responsibility. To this end, Freie Universität relies on its long-standing experience in – and successful continuous dedication to – energy and sustainability management.

For Freie Universität Berlin, declaring a climate emergency stems from a sense of urgency and comprises the following intentions:

- CONSIDERING THE POSSIBLE CONSEQUENCES FOR THE CLIMATE IN ALL DECISIONS AND PLANS
- ACHIEVING CLIMATE NEUTRALITY AT FREIE UNIVERSITÄT BERLIN BY 2025
- MAKING SUSTAINABILITY AND CLIMATE PROTECTION EVEN MORE VISIBLE IN RESEARCH, TEACHING, AND KNOWLEDGE TRANSFER IN THE FUTURE AND SYSTEMATICALLY EMBEDDING THESE THEMES IN OUR INTERNATIONAL NETWORKS
- COMPREHENSIVELY INTEGRATING CLIMATE PROTECTION AND SUSTAINABILITY IN FREIE UNIVERSITÄT BERLIN'S CURRICULA
- ACTIVELY SUPPORTING ALL UNIVERSITY MEMBERS' PERSONAL DEDICATION TO SUSTAINABILITY AND CLIMATE PROTECTION THROUGH IDEAS AND INNOVATION MANAGEMENT
- CONTINUING OUR EFFORTS TO PROMOTE SUSTAINABILITY AND CLIMATE PROTECTION IN OUR OWN AREAS OF RESPONSIBILITY WITHIN THE ADMINISTRATION AND ON CAMPUS
- ASSESSING AND DOCUMENTING OUR PROGRESS THROUGH PERIODIC REPORTS

SETTING STANDARDS IN CLIMATE PROTECTION

Interview on the
Climate Emergency Declaration with
Professor Verena Blechinger-Talcott,
Vice President for International Affairs and
Sustainability in Research and Teaching

In December 2019, Freie Universität Berlin became the first German university to declare a climate emergency. This is an unusually strong commitment. What arguments were decisive for the Executive Board?

We discussed several considerations in the Executive Board. On the one hand, we think of ourselves as an institution with the responsibility to emphasize the societal importance of science. All developments in climate protection politics in the past 30 years would have been impossible without an active role of science in society. With our declaration, we wanted to emphasize the scientifically proven urgency of climate protection.

On the other hand, we are very familiar with the topic. Institutionally, we have been addressing climate protection and energy efficiency for two decades. Through a combination of diverse measures, we have succeeded in reducing our CO₂ emissions from energy and heat consumption by 80 percent since 2000.

Did the student plenary meeting in June 2019 play a role?

Indeed, it did. The student plenum, which was initiated by the student group *Fridays for Climate Justice*, decided on an ambitious list of climate protection demands. We, the Executive Board of Freie Universität, considered these demands over the course of multiple meetings. Meanwhile, the students intensively followed up on the energy situation at Freie Universität, which really impressed us.

We are still the only German university to have declared a climate emergency. Internationally, however, 280 universities worldwide have made such declarations. Several of our partner universities – such as the University of British Columbia in Vancouver, the University of Berkeley, California and the University of Edinburgh – declared climate emergencies last year. So, we feel that we are in good company.



The Climate Protection Declaration has seven subgoals, and the most ambitious stipulate that the university should consider climate protection in all its decisions and plans and be climate neutral by 2025. How can this be achieved?

We already consider climate protection in many areas, including procurement and the ongoing transition of our vehicle fleet to e-mobility. Moreover, we already follow construction-related sustainability standards in building projects. Now, however, we want to check every area of the university to determine what additional measures we can take. Overall, we intend to go far beyond what is legally required, as our goal of climate neutrality by 2025 proves. We know that we can only succeed when all areas of the university participate and contribute. At the end of 2019, the Executive Board and the Academic Senate formed a *Steering Committee for Sustainability and Climate Protection*. The Steering Committee is firmly anchored in the univer-

sity's governance structure and will advise us on this journey to climate neutrality. At the first meeting of the committee in January 2020, one could feel a strong spirit of change and action. The great advantage of this goal is that all parts of the university are eager to get involved.

The new Steering Committee has created hope, and you are heading this committee. In your view, what will be its key aspects?

During the first three meetings in 2020, the committee primarily addressed the topic of climate neutrality due to its urgency. In our next meetings, it is important that we develop a clear road map as quickly as possible. We will then address the remaining issues of the Climate Emergency Declaration one by one.

*Interview conducted by Andreas Wanke,
Unit for Sustainability & Energy Management*

FRIDAYS FOR CLIMATE JUSTICE

Sustainability from the perspective of the Fridays for Climate Justice initiative

As *FU for Climate Justice*, we would like to highlight some student perspectives. Our group's work focuses on the subject of "climate justice," going beyond the mere ecological dimension of sustainability. We thus focus on participating in campaigns and organizing events, especially additional educational offers on issues of climate justice such as the *Lectures for Climate Justice* and the *Public Climate School*.

We also try to facilitate student self-organization in order to involve as many parties as possible in shaping a more sustainable and just university. Time and again, we have created spaces where various perspectives can be exchanged, producing constructive debates on sustainability and climate justice.

In June 2019, a plenary meeting of all students convened and passed a list of de-

mands, calling for concrete steps by the university to achieve climate neutrality by 2025 – which is also one of our demands. Thanks to the enthusiastic willingness of all participants to get involved in the process, the plenary meeting produced detailed demands. In addition to solidarity with the demands of *Fridays for Future Germany*, they call for concrete measures from the university, the students' services organization (*Studierendenwerk*) and the City of Berlin, spanning areas such as mobility, construction, divestment, and energy.

Further demands were discussed in detail at a second plenary meeting in November 2019. The students discussed a broad array of topics in smaller focus groups over the course of a week. The topics' breadth demonstrates that the students understand "sustainability" as extending far beyond climate protection



and that they see a great need for action in various political, economic, and social realms.

The experience of a student plenum actively taking the necessary time (four days) and space (a lecture hall) shows how the participation of all university members can be successfully encouraged – which all sides agree is essential.

For this reason, we will not only continue to work on the demands that remain to be passed but also create future spaces for exchange among all members of the university. In a similar vein, we will continue to seek exchanges with the Executive Board in order to approach the university's committees with further demands.

The measures implemented by the university over the past few years are laudable, but

past successes should not distract our attention from the work still ahead of us. After all, the goal of creating a sustainable university necessitates more than just a viable strategy for reducing CO₂ emissions.

After an extensive conversation about the demands of the first plenary meeting in October 2019, we came to believe that the university did not want to agree to stricter measures. Now, after the Climate Emergency was declared (which was one of our demands), we are more optimistic that students' perspectives – which are an integral part of the university, just like the students themselves – will be heard and also actively integrated into decision-making processes.

*Fridays For Climate Justice initiative,
Freie Universität Berlin*



TEACHING FOR
A SUSTAINABLE WORLD

TEACH
ING



TEACHING AT A GLANCE

Since the summer semester of 2016, the Unit for Sustainability and Energy Management has been evaluating all courses, to map how many of them address sustainability. The survey is based on the course titles and descriptions from Freie Universität's course offerings in combination with criteria for courses related to or focusing on sustainability. The 17 *Sustainable Development Goals (SDGs)* form the basis of these criteria.

The evaluation of the 2019/20 winter semester shows that 678 of the surveyed courses, or 16.3 percent, relate to sustainability. Compared to the year before, this is an increase of 2 percentage points. As in previous years, the Department of Political and Social Sciences offers the highest number of courses related to sustainability, (26 percent), followed by Geosciences and the Department of Biology, Chemistry, and Pharmaceutics (12 percent each). SDGs 16 (*Peace, Justice, Strong Institutions*), 15 (*Life on Land*), and 4 (*Quality Education*) were addressed most often in the university's courses.

In the *Climate Emergency Declaration* of December 2019, Freie Universität committed to expanding its offerings of courses addressing sustainability and comprehensively integrating sustainability in its curricula.

COURSES

4,159

Courses total
Winter Semester 2019/20

678

Thereof Sustainability-
Related Courses

185

Thereof Sustainability-
Focused Courses

COURSES SORTED ACCORDING TO
SUSTAINABLE DEVELOPMENT GOALS



COURSES SORTED ACCORDING
TO ACADEMIC DEPARTMENTS

Political and Social Sciences	177
Biology, Chemistry, and Pharmacy	82
Earth Sciences	78
Education and Psychology	57
Philosophy and Humanities	47
Law	36
Veterinary Medicine	36
all other departments & institutes	165
total	678

* Courses related to sustainability dedicate at least one unit of the course to SDGs, while courses with a focus on sustainability impart a fundamental understanding of sustainability.

Sustainability is the crosscutting issue of our times; the transfer from science into our working and living environments is of central importance.

Oliver Schmidt, Profund Innovation, FU Berlin
(Module: Managing Sustainability, Focus: Entrepreneurship)

Through their project-oriented approach, the ABV-seminars strengthen not only the cross-disciplinary development of students' competencies, but also their self-efficacy in creating social change.

Dr. Mandy Singer-Brodowski, Institut Futur
(Module: Designing Sustainability Concretely, Focus: Education for Sustainable Development)

What I especially [...] like is that the scientific input is an indirect call to action. [...] The seminar has really had an influence on me, since the many practical experiences were really enriching [...] and made me realize that I want to work in the field of integration after my studies.

Roxanne Honardoost
Iranian Studies, 4th semester

Discussions and presentations with various focus topics like “sustainable business models” and “realization of climate policies in cities” have expanded my interest in and knowledge of sustainability issues to such an extent that I want to work in a sustainability context.

Mine Ak
Economics, 7th semester

THE SUSTAINABLE DEVELOPMENT COMPETENCE AREA

The *Sustainable Development Competence Area* in the *General Professional Skills Courses (ABV)* was developed by members of the “Teaching” working group of the Steering Committee for Sustainability, which has been coordinated by the Unit for Sustainability and Energy Management since the 2018/19 winter semester. The ABV area is a compulsory subject for nearly all bachelor students at Freie Universität Berlin. This gives the competence area the ability to reach students from various disciplines and bring them in conversation with one another.

With regard to contents and didactic approaches, the competence area is inspired by the concept and principles of *Education for Sustainable Development (ESD)*. The module is divided into a foundational phase and a practical phase. The foundational phase is composed of the lecture series *Transforming Our World*, which spans all four modules and is based on the United Nations' 2030 Agenda for Sustainable Development. In the project seminars which form the core of the practical phase, students develop and implement sustainability-related projects on campus or in collaboration with actors from business, politics, or civil society.

The Unit for Sustainability and Energy Management is responsible for the lecture series addressing three interdisciplinary focus topics:

- 1) *Transformation in times of multiple crises*
- 2) *Sustainable development – an oxymoron?*
- 3) *Transformation strategies and their critics*

The digital lecture series held during the COVID-19 pandemic included a range of self-study materials and was well-received by the diverse group of ABV students. Therefore, it will be repeated online during the 2020/21 winter semester and continued indefinitely.

In addition to the lecture series, students enroll in a project seminar within one of the four modules. Since the first pilot modules in the 2017 summer semester, the number of seminars offered has grown continuously and the seminars are increasingly marked by a diversity of contents and methods. The competence area has been in high demand and has been well-received by students.



FRIDAYS FOR CLIMATE JUSTICE IN DIALOGUE

The *Fridays for Climate Justice* student group of Freie Universität Berlin is advocating for a wider integration of climate protection and sustainability in all academic departments. In the 2019/20 winter semester, the group offered two event formats expanding Freie Universität's extracurricular course offerings with a sustainability focus.

The *Lectures for Future* series highlighted backgrounds on the climate crisis from various disciplinary perspectives. Scientists from Freie Universität and external experts were invited to give weekly presentations followed by discussions with the audience.

The *Public Climate School*, a Germany-wide collaboration with Students for Future, took place from November 26 to 29, 2019 during the weeklong global climate strike. The efforts sought to reiterate the students' demands through a university-wide strike. With the slogan "An open university for all", the *Public Climate School* offered a wide range of seminars, lectures, discussions, and campaigns focusing on the climate crisis and its possible solutions.

PILOT SEMINAR IN ELEMENTARY SCHOOL PEDAGOGY

The supplementary study area *Professional Science for School Teachers (LBW)* is an inherent part of the Bachelor's degree program in teacher training at Freie Universität. In the 2019/20 winter semester, the *Education for Sustainable Development (ESD)* pilot seminar (within the supplementary area of elementary school pedagogy) emerged from a collaboration between the Unit for Sustainability and Energy Management and the Dahlem School of Education (DSE).

The seminar, *Realizing ESD at Schools Using Digital Media* combines the social and academic challenges of sustainability and digitalization with practical vocational preparation. Seminar participants develop media formats and methods that encourage elementary school students to think and act sustainably and are compatible with the Berlin-wide core curriculum and the respective school subject. The plan is to include a permanent ESD module in the LBW course offerings for DSE teacher training.

LECTURE SERIES: TRANSFORMING OUR WORLD THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

Since 2019, the Unit for Sustainability and Energy Management and the initiative *Sustain it!* have been working with the *German Corporation for International Cooperation (GIZ)* and *Engagement Global*. In November and December 2019, the series "SDGs in Practice – Sustainability in the Textile and Clothing Industry" offered five weekly lectures. Stakeholders from politics, business, civil society, and science debated how the SDGs can be achieved globally and locally, with a special focus on sustainable production and consumption. A digital series with the focus "Is sustainable mobility finally taking off?" is currently being prepared for the 2020/21 winter semester.



SUPPORT FOR TEACHING

The *Certificate Program for Systematic Teaching Qualification*, which has been funded through the Teaching Quality Pact since 2010, was successfully continued and expanded in its second funding phase (2017-2020). It combines foundational and advanced knowledge in higher education didactics with additional support such as consultations, lectures, and formats for constructive criticism. Beyond the core target groups (research assistants, junior professors, and young scientists), workshops and coaching for experienced lecturers were offered for the first time as part of *SUPPORT-Pro*.

In addition, more subject-specific and on-demand courses were designed in close cooperation with the respective faculties. In response to the COVID-19 pandemic, the *SUPPORT* team shifted all workshops to be held online and launched the podcast *Lehre an:gesagt* (a pun meaning simultaneously that teaching is hip and on demand). Overall, the digitalization of the teacher qualification program has contributed to closer cooperation and connection with the training program of Freie Universität's *CeDiS (Center for Digital Systems)*. Once funding through the *Teaching Quality Pact* ends, foundational *SUPPORT* workshops and consultation offers will be funded directly by Freie Universität after 2021.

FROM KNOWLEDGE TO ACTION

Interview with Karola Braun-Wanke, academic coordinator of the sustainability initiative *Sustain it!*, about implementing the concept Education for Sustainable Development (ESD) in seminars



Since 2013, long before the introduction of the Sustainable Development Competence Area, you have organized practice-oriented seminars based on the concept of Education for Sustainable Development.

How did you come up with the idea for your first seminar?

The idea emerged over the course of our Sustain it! activities on campus and in dialogue with students and colleagues. Our inquiries and conversations showed that sustainable development issues played only a marginal role, especially in teaching. As an initiative, we started our first lecture series in the 2013 summer semester as part of the *Open Lecture Hall*. For the following semester, we designed and offered a two-semester project course called *From Knowledge to Action – Social-Ecological Transformation in Times of Multiple Crises*.

In terms of ESD, what didactic features did the course offer?

What made the course special was that in addition to theoretical discussions, students could develop their own transformative projects on campus. These projects focused on critically examining entrenched consumption patterns and lifestyles while pointing to alternatives in everyday life. Besides the practical part, we also provided insights into innovative and discourse-oriented methods like Design Thinking, Strategic Planning, and World Café to help the idea-generation process.

In hindsight, how would you assess the seminar? How did the students respond to it?

It was probably a new experience for the students not to receive pre-determined tasks. Instead, they were

asked to freely choose a topic as a team, define their own research questions, and realize their projects rather autonomously. As a result, they learned about the basics of project management with all its practical hurdles and pitfalls. We also invited experts and practitioners from civil society who gave insights into the press and public relations as well as strategies for participation and financing. Since all the groups were able to carry out their projects very successfully on campus, a sense of collective pride quickly set in: “We’ve made it!” These are important and formative experiences for self-efficacy.

Since 2018, your seminars have been linked to the Sustain it! University Days. How did this come about?

This happened gradually over time, simply because we realized that the great voluntary commitment to the University Days goes well with the student project

ideas from the seminars. The University Days offer students an excellent opportunity to test their projects in front of a large audience in a well-established event format, and the event benefits from the great ideas generated in the seminars.

What are your hopes for the future?

I hope that issues of sustainable development will play a much bigger role in all faculties than they do currently and that students will have opportunities to face the urgent issues of our time during their studies.

This interview was conducted by Bettina Tacke, Unit for Sustainability and Energy Management

THE SUSTAINABILITY TOOLBOX

A toolkit for sustainability in academic teaching

The Unit for Sustainability and Energy Management, in cooperation with the *Center for Digital Systems (CeDiS)*, is currently developing a digital platform to promote sustainability topics and approaches in teaching, research, and on campus.

The central idea of the *Sustainability Toolbox* is to offer students, teaching staff and interested employees a basic orientation in the field of sustainability and to support them with the necessary tools for thinking and acting sustainably at university.

To promote holistic and long-term institutional learning, the platform is inspired by central concepts from sustainability and transformation research, *Education for Sustainable Development (ESD)*, and the *Whole Institution Approach*.

The *Sustainability Toolbox* comprises the following content elements:

- The component **What is Sustainability?** addresses the basic challenges, questions, and concepts of sustainability and transformation in three modules and offers a succinct, content-based introduction. Graphics, video recordings of the ABV-lecture series, and interactive learning tools will also be available.
- The component **Studying Sustainability** gives students an overview of the *Sustainable Development ABV Competence Area* as well as other course offerings focused on sustainability at Freie Universität and other universities.
- The component **Sustainable Perspectives** offers students tips and contacts for professional orientation and volunteer opportunities in the field of sustainability.
- The component **Sustainable Methods** provides university teachers with a di-

dactic introduction to the *ESD* concept, as well as a “sustainable methods toolkit”. The latter contains information and best-practice examples for the conception and realization of teaching formats and projects relating to sustainability.

- The component **Sustainable University** offers an overview of existing sustainability-focused stakeholders and activities on Freie Universität’s campus. It also covers interesting achievements that have been achieved in cooperation with (inter) national network partners of the university.

The *Sustainability Toolbox* targets three groups in particular:

Students receive concrete suggestions for thinking about issues of sustainability, getting involved, or (re)orienting themselves professionally; this guidance can be basic or more advanced and either part of or additional to the students’ studies.

Lecturers encounter concrete examples of how to design and modify courses with a sustainability focus in an innovative and participatory way.

University staff receive concrete tips for making the campus more sustainable and livable and gain the opportunity to network with each other.

A pilot version of the *Sustainability Toolbox* is scheduled to launch in the 2021 summer semester as part of the *Sustainable Development ABV Competence Area*. Based on feedback from students and lecturers, it will be evaluated and developed further.

Nora Große,
Unit for Sustainability and Energy Management





RESEARCHING FOR
A SUSTAINABLE WORLD

RE
SEARCH

RESEARCH FOR SUSTAINABLE DEVELOPMENT

Freie Universität Berlin has addressed aspects of sustainable development in its research and teaching for decades. Examples include the *Environmental Policy Research Centre* – founded in 1986 and dedicated to this day to questions of ecological modernization, resource conservation, and climate protection – and *Institut Futur*, which was founded in 2000 and conducts in-depth research into *Education for Sustainable Development (ESD)*. The university’s unique combination of biodiversity research, the *Botanic Garden* and the *Botanical Museum* should also be highlighted in this context. A diverse range of sustainability competencies can be found in the Biology, Chemistry, Pharmacy, and Geosciences Faculties. The latter also includes the Institute of Meteorology, which conducts research on atmospheric processes, weather, and climate simulations.

Between 2017 and 2019, the number of third-party funded research projects at Freie Universität Berlin increased by 16 percent. 665 of 1,796 projects (37 percent) addressed sustainable development issues. This is a much higher share than in 2017 (30 percent).

All disciplines contribute to research on sustainable development, especially the five faculties Biology, Chemistry and Pharmacy; Political and Social Sciences; Geosciences; Educational Science and Psychology. Out of the United Nations’ 17 *Sustainable Development Goals (SDGs)*, research projects most often addressed the goal on *Health, Life on Land, Peace, Justice, Strong Institutions*, and *Climate Action* also received above average representation.

In the following, several exemplary research contexts and projects will be presented.

INITIATIVE AND STRATEGY FOR EXCELLENCE

In 2019, the *Berlin University Alliance* became the only university cluster to be selected alongside ten universities as part of the Strategy for Excellence competition of the German federal and state governments. Freie Universität Berlin, Humboldt-Universität zu Berlin, Technische Universität Berlin, and Charité – Universitätsmedizin Berlin applied successfully with *Crossing Boundaries toward an Integrated Research Environment*. The central aim is to conduct joint research on great societal challenges along with overlapping projects on diversity, equal opportunities, and internationalization.

RESEARCH PROJECTS

1,796

Research Projects total 2019

665

Thereof Sustainability-Related Research Projects

177

Thereof Sustainability-Focused Research Projects

RESEARCH PROJECTS SORTED ACCORDING TO SUSTAINABLE DEVELOPMENT GOALS



RESEARCH PROJECTS SORTED ACCORDING TO ACADEMIC DEPARTMENTS

Biology, Chemistry, and Pharmacy	171
Political and Social Sciences	96
Education and Psychology	81
Earth Sciences	64
Veterinary Medicine	53
Mathematics and Computer Science	43
all other departments & institutes	157
total	665

* Research projects related to sustainability address at least one SDG, while research projects with a focus on sustainability center around sustainability and contribute to solving global challenges.

BRIDGING IN BIODIVERSITY SCIENCE

Biodiversity is a research subject in a variety of disciplines at Freie Universität. Funded by the German Federal Ministry for Education and Research (BMBF), the joint project *Bridging in Biodiversity Science (BIBS)* combines various research approaches and conducts studies at the often-neglected intersections of different disciplines. Human-induced changes to ecological systems and the impacts of new stressors like microplastics are at the core of this biodiversity research. The project examines the entire chain of causes, mechanisms, and consequences affecting diversity within various ecosystems.

Furthermore, *BIBS* promotes direct exchange with public authorities and environmental protection organizations, seeking to provide political decision-makers with the up-to-date knowledge while integrating political questions into research. The project involves scientists from Freie Universität, Universität Potsdam, Technische Universität Berlin, and various Institutes of the Leibniz Association.

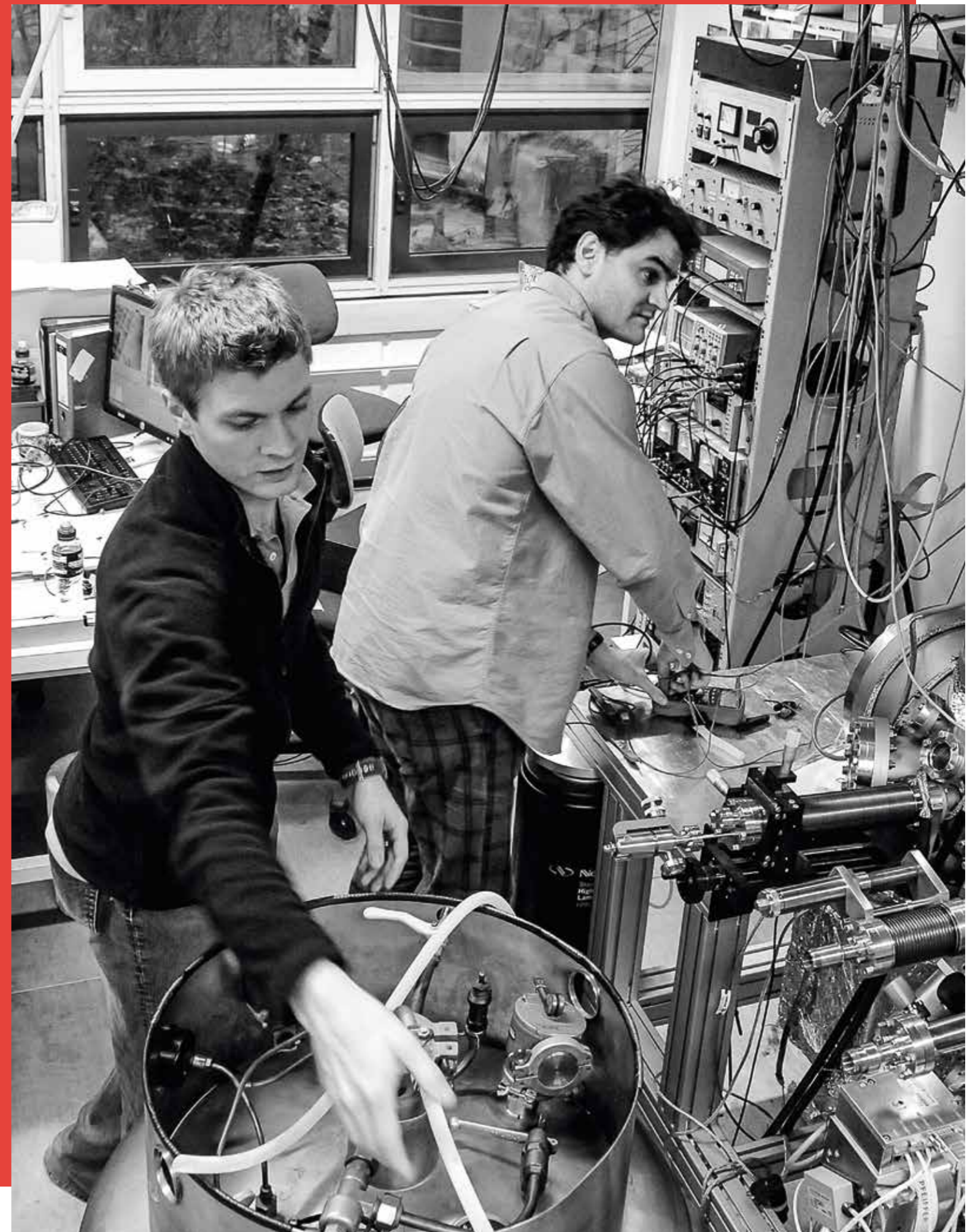
FUBIC – ALL-ELECTRICITY FOR TECHNOLOGY QUARTERS

Labs and offices for young entrepreneurs from the life sciences, health care management, and IT near Freie Universität (on the former premises of a US military hospital) will soon become the *Business and Innovation Centre next to Freie Universität Berlin Campus (FUBIC)*. The core aim of the accompanying research project *FUBIC – All-Electricity for Technology Quarters*, is to transform this fossil fuel-based area into Germany's first CO₂- and emission-free all-electricity system in a non-residential area.

The joint project is realized by WISTA Management GmbH as the property owner and project manager, RWTH Aachen, and Freie Universität Berlin. The latter is responsible for the subproject *Social Science Research – Technology Acceptance and Stakeholder Analysis*. The project is funded by the Federal Ministry for Economic Affairs and Energy (BMWi).

THE POLITICAL ECONOMY OF E-MOBILITY

The transition toward a transportation system that relies more strongly on electric mobility involves competing interests and values. *The Political Economy of E-Mobility*, a research project conducted by the Environmental Policy Research Centre, aims at an integrated understanding of the dynamics of the transition toward electric mobility in Germany and Europe.





CONTESTATIONS OF THE LIBERAL SCRIPT

The excellence cluster *Contestations of the Liberal Script (SCRIPTS)* was selected in autumn 2018 to be funded as part of the Strategy for Excellence research competition of the German federal and state governments. Researchers in the cluster examine contestations of the liberal order by authoritarian states and violent non-state actors from a historical, global, and comparative perspective. Moreover, they investigate the causes of current 21st century conflicts, their effects on democracy, and solutions to global challenges.

FOOD FOR JUSTICE

How will we feed the world in the future? How do citizens imagine a social, ecological and fair food system? These are some of the central questions of the research group *Food for Justice: Power, Politics and Food Inequalities in a Bio-Economy* at the Institute for Latin American Studies (LAI). The researchers examine questions of global food safety based on fair and ecological strategies.

Food for Justice combines theoretical perspectives on global inequalities with social movement research. The group aims to discuss challenges and solutions in Europe (Germany) and Latin America (Brazil). This includes research on inequalities, justice, and democracy against the background of the growing politicization within production, distribution, and consumption.

trAndeS POSTGRADUATE PROGRAM

trAndeS Postgraduate Program on Sustainable Development and Social Inequalities in the Andean Region, a joint program by *Pontificia Universidad Católica del Perú* in Lima and *Freie Universität Berlin*, examines the connection between social inequalities and the potential for sustainable development in the Andean region. The results are expected to contribute to sustainable development in the region and support the establishment of a sustainability network in Latin America.

Since 2016, the *German Academic Exchange Service (DAAD)* has supported the project with funds from the *Federal Ministry for Economic Cooperation and Development (BMZ)*. In 2020, a second funding period that will support the project until 2025 was approved. Innovations in research approaches and virtual tools for cooperation will enhance the project in its second period. It is coordinated at the Institute for Latin American Studies.

IMPLEMENTING INNOVATIONS

The Berlin Start-up Stipendium supports sustainability-related business innovation

Innovation is an engine promoting ecological, economic, and technological change. With the *Berlin Start-up Stipendium*, a consortium of Berlin universities has jointly supported innovative, science-based start-up projects since 2017. The consortium consists of Freie Universität Berlin, Charité – Universitätsmedizin Berlin, Humboldt-Universität zu Berlin, and Technische Universität Berlin. More than 300 awardees from over 100 prospective enterprises have participated in the program and more than 50 companies have come into existence this way.

Sustainability is one of the program's central selection criteria. So far, the focus has been on the economic and social aspects of sustainability, so there is still potential for advancing ecological issues. A clear trend at Freie Universität is the increased promotion of business ideas from the humanities and social sciences, which has also led to an increase in female entrepreneurs. While less than a third of all grant recipients were women in late 2016 when the program was launched, this share had increased to nearly 50 percent in 2020.

This funding program of the Senate Department for Economics, Energy and Public Enterprises has

expanded its previous focus on innovative technologies and growth to include issues of sustainability. It is co-funded by the European Social Fund.

START-UPS WITH A SUSTAINABILITY FOCUS

Aumio UG has developed a mindfulness app for children's mental health. The app offers playful elements for children struggling with attention disorders, tantrums, hyperactivity, and other emotional challenges.

Kornwerk produces plant drinks from regional and ancient grains in order to promote plant diversity. The drink is sold in reusable glass bottles and does not use any plastic. Regionally produced and sold, the company also avoids greenhouse gas emissions.

Die Zukunftsbauer gUG is a non-profit educational collective offering interactive teaching concepts and materials for academic and vocational

orientation. The collective's goal is to prepare children for the work environments of the future.

Veteducators GmbH designs mock-up models for simulating invasive surgery on laboratory animals in teaching and research. The start-up thus actively contributes to animal welfare. The models are used to train veterinarians and farmers and in animal testing.

DearEmployee offers a simple and digital solution to improve employees' mental health. The app suggests measures to promote employee health and develop human resources, thus promoting healthy work conditions within the company.

Circular.Fashion UG is an agency that develops product and system innovations for a circular economy in fashion and textiles. Its core elements are a digital platform and software for circular fashion, and it also provides consultations and training to incite sustainable change within the industry.

Tatort Zukunft e. V. develops projects in prison in which people from inside and outside the prison can learn from one another and form sustain-

able connections. At the intersection of academic research and prisons, *Tatort Zukunft* believes in lived resocialization and the practical implementation of human rights.

Not less but better aims to enable excessive mobile phone users to have a healthier relationship with their phone. A digital assistant based on cognitive behavioral therapy is a central component of this health-focused start-up.

Aivy supports a non-discriminatory first evaluation in the employee recruitment process. The digital application process designed by Aivy makes applicants' individual potentials visible in a scientifically substantiated way. This produces more valid data, making employee recruitment more transparent and efficient.

Steffen Terberl,
Head of Profund Innovation, Research Department





TRANSFERRING
FOR A SUSTAINABLE
DEVELOPMENT

DIA LOGUE

IN EXCHANGE WITH SOCIETY

Freie Universität Berlin aims to foster exchange with a range of societal stakeholders to help transfer knowledge from research, teaching, and management to the public sphere. This mutual dialogue creates diverse opportunities for communicating about the crosscutting issue of sustainability both within and in cooperation with society.

SUSTAIN IT! UNIVERSITY DAYS SUSTAINABILITY + CLIMATE PROTECTION

The University Days' goal is to develop solutions and alternative actions that respond to global societal challenges such as the climate and biodiversity crises. With up to 2,000 active participants, a popular campus format has been established at the intersection of teaching and practice.

The *University Days Sustainability + Climate Protection* were held in 2018 and 2019 with the slogans "Is that trash?" and "Do it 4 Future!". For one week, the university's sustainability initiative *Sustain it!* organized a diverse, action-oriented program together with students from the module *Designing Sustainability Concretely* within the General Professional Skills Courses (ABV) study area. In 2019, the University Days were offered for the sixth time. The student-led information campaign *Whynomilk?* also emerged in this context and won the 2019 Federal Sustainability Award.

The University Days are supplemented by thematic action days, including diverse campaigns, movie nights, and discussions. For instance, the *Fashion Revolution Day* looked at sustainable clothing production in 2019, and the campaign *Re:think Eating – The Future of Food* focused on healthy nutrition.

Schools@University in figures 2009-2019

21

Schools@University

1,330

Events

30,994

Students

2,727

Teachers



SCHOOLS@UNIVERSITY FOR SUSTAINABILITY + CLIMATE PROTECTION

Since 2009, Freie Universität Berlin and its educational format, *Schools@University for Sustainability + Climate Protection*, have been giving Berlin school students from 10 to 13 years old the opportunity to experience sustainability on campus by "learning with the head, heart and hands". Twice a year, approximately 3,000 students from 100 schools, accompanied by up to 300 teachers, take part in participatory and creative workshops. The latter take place in university labs, lecture halls, the university's community garden, the Botanic Garden, or the Botanical Museum.

The project is complemented by half-day training workshops for teachers in order to promote a teaching and learning culture for sustainable development and initiate processes of change at schools. Cooperation and joint projects have yielded an active network of about 100 environmental and educational stakeholders from schools and other institutions under the umbrella of *Schools@University*. Freie Universität Berlin has received several awards for this educational format; most recently, the university received the *International Sustainable Campus Network (ISCN) Award* in the category *Excellence in Innovative Collaboration* in 2018.

ARTISTIC INTERVENTIONS FOR SAVING RESOURCES

In order to call attention to the growing trend of disposable coffee to go on campus, the initiative *Sustain it!* developed the art lab *ART TO STAY – Indulging Once Again* in 2016. The campaign's goal was an ecological, consumption-critical, and aesthetic-artistic examination of this resource-intensive yet ubiquitous trend on campus.

Between 2017 and 2019, the art lab was presented in Tel Aviv, Vancouver, Hamburg, Göttingen, and Berlin, for instance at the 23rd *Grüne Liga Environmental Festival* in 2018. The temporary art events have reached about 6,000 people so far, and they contributed to the students' services organization (Studierendenwerk) abolishing the to go cup altogether in 2019.

FUdsharing – SAVING FOOD, MADE EASY

Since 2011, the *Sustain it!* initiative has examined food waste through a diverse range of hands-on activities such as tastings, round tables, film screenings, and discussions. Moreover, students have created a concrete solution to food waste with the food distribution station *FUdsharing* on Freie Universität's campus, founded in 2017.

The students pick up food from nearby grocery stores, cafés, and bakeries for free and distribute them to anyone interested. With *FUdsharing*, *Sustain it!* has established a popular place on campus for learning about and discussing questions of sustainable nutrition and food production.



THE “OPEN LECTURE HALL”

Freie Universität has organized an interdisciplinary series of public lectures for more than three decades. These lectures give a broad audience the opportunity to participate in scientifically sound analyses of global problems and new research findings. Since 2013, numerous lectures on sustainability have taken place in this framework. Most recently, the public lecture *The Nuclear Conflict in Germany – for all Eternity?* in the 2019/20 winter semester examined solutions for the final disposal of radioactive waste and the resolution of a conflict that has endured for decades.

LONG NIGHT OF SCIENCES

Since 2001, Freie Universität has participated in the *Long Night of Sciences* once a year. In 2019, over 16,000 people attended approximately 400 events hosted by all the disciplinary areas. Visitors were able to gain interesting insights into fundamental and applied academic research as well as novel research findings.



UniGardening@SUSTAIN IT!

Since 2013, students of various disciplines and universities, as well as university employees, have come together for the project *UniGardening@Sustain it!* to cultivate an ecological community garden. The garden also serves as a green learning and meeting space.

As part of the *Botanical Night* and the *Long Urban Nature Day*, *Sustain it!* has been providing tours and participatory offers around ecological agriculture since 2014. Amongst other activities dyeing workshops are held in cooperation with artists from *sevengardens Berlin*; participants can try out this ancient cultural technique with plant substances. The *Botanical Night* has been hosted at the Botanic Garden since 2009 and more than 20,000 visitors took part in the two-day event in 2019.

NatLab

The *NatLab* was set up in 2002 as a participatory and experimental lab for schoolchildren. It aims to make the natural sciences more accessible to children and youth and to nourish or awaken their enthusiasm via active experimentation.

Issues of sustainability and the concept of *Education for Sustainable Development (ESD)* play an increasingly important role in this context. In 2019, almost 3,400 schoolchildren visited *NatLab*, and 112 student teachers and 22 schoolteachers were trained.

LEARNING IN EDUCATIONAL LANDSCAPES

In the summer of 2019, the *Coordination Unit for Nature, Environmental, and Sustainability Education* was founded in the Berlin district of Steglitz-Zehlendorf and has been based at Freie Universität.

The project's goal is to raise awareness about the district's diverse activities and green learning spaces that deal with education related to nature, the environment, and sustainability. A newly founded advisory board, an online platform, and interactive, participatory event formats promote cooperation between formal and informal educational institutions. The new contact point coordinates all educational offerings and supports the development of a pool of educators to help teach environmental, nature-related and sustainability goals.

Lab2Venture goes green

As part of the *Lab2Venture Goes Green* project, students from 8th to 12th grade from Berlin and Brandenburg receive project assignments from green businesses or educational institutions.

The project's goal is to develop systemic interrelations between sustainability issues together with the students. Moreover, it aims to awaken the spirit of research in school students to inspire innovative ideas for solving societal challenges as well as to encourage green career choices. *Lab2Venture Goes Green* is funded by the *German Federal Environmental Foundation (DBU)*.



STUDENT LAB NETWORK GenaU

With numerous campaigns, the *Student Lab Network GenaU* aims to make school students excited about STEM (science, technology, engineering, and mathematics). Members of this network allow school students to visit research institutes and universities to conduct experiments and acquaint themselves with day-to-day research work.

The *Student Lab Network* was founded in 2006 and, to date, includes 16 members at research institutes and universities along with eight associated partners in Berlin and Brandenburg. The coordination office is based at Freie Universität Berlin.



SHAPING OUR
UNIVERSITY SUSTAINABLY

CAMPUS

CLIMATE PROTECTION ON CAMPUS

In campus-related climate protection, Freie Universität has been quite successful. Through various measures, the university reduced energy consumption in its buildings by 26.6 percent between 2001 and 2019. Excluding the increase in floor space, the reduction amounts to as much as 29.2 percent. These achievements in energy conservation and efficiency can be attributed to the following activities:

- The introduction of a university-wide energy controlling system in 2001, which has successively been expanded into an online-energy-monitoring system. This enables the university to react quickly to anomalies and problems in the development of building-related energy consumption.
- Annual energy efficiency programs with energy optimization measures in operational technologies and roof insulation. The university spent 1.5 to 2.5 million euros annually on these measures between 2003 and 2011.
- Since 2007, the energy-saving bonus system enables departments to generate extra income if they successfully reduce energy consumption in their buildings.
- As part of the green IT action program established in 2010, targeted energy efficiency measures were introduced in the IT division. These included the modernization of the data centers' cooling generation and distribution, the centralization of the server landscape, and the optimization of power management and IT procurement.
- In addition, since 2012, Freie Universität Berlin has installed four combined heat and power plants with a total capacity of 715 kWel. Moreover, the university installed nine photovoltaic plants with a capacity of 657 kWp between 2008 and 2011.

Aspects of energy and sustainability are also systematically considered in all construction activities, floor space management, and procurement procedures. According to the CO₂ factors published by the energy suppliers, these measures resulted in a CO₂ reduction of 80 percent between 2001 and 2019. It should be noted that Freie Universität Berlin has been purchasing CO₂ free electricity since 2010, as part of the urban electricity supply contract coordinated by the State of Berlin. This measure is responsible for about four-fifths of the reduction described.



CLIMATE PROTECTION AGREEMENT

Despite these achievements, Freie Universität committed to a second climate protection agreement with the State of Berlin in 2018 to reduce on-campus energy consumption by another 10 percent between 2016 and 2027. In addition to the technical-structural measures related to building maintenance and management, the university is also relying on the university-wide *online-energy-monitoring* - and the continuation of the *energy-saving bonus system* to help meet this goal. Freie Universität has been working with this system since 2007, and, to date, it is one of only two universities in Germany with such a financial incentive system. In 2011, it also became the first – and, for over five years, remained the only – university in Berlin to express its special commitment to institutional climate protection through a climate protection agreement.

CLIMATE NEUTRALITY 2025

An important subgoal of the Climate Emergency Declaration is to make Freie Universität climate neutral by 2025. This goal refers to the sum of CO₂ emissions from on-campus energy consumption, the university’s vehicle fleet, and business travel. The latter accounted for approximately one-third of total emissions in 2018, while district heating and natural gas contributed 36 and 29 percent of CO₂ emissions, respectively.

The vehicle fleet’s emissions only make up a minor proportion of around one percent. The CO₂ factors for district heating, natural gas, and electricity were based on information provided by the energy suppliers and the electricity supply contract. Finally, the flight emissions are calculated using applicable data from the German Federal Environment Agency.

BASELINE SITUATION IN 2018 – CARBON FOOTPRINT OF FREIE UNIVERSITÄT BERLIN

	District Heating	Natural Gas	Heating Oil	Electricity	Fleet*	Campus	Business Travel (only flights **)	Total
	in t	in t	in t	in t	in t	in t	in t	in t
CO ₂ emissions according to supplier information/ electricity supply contract	6,475	5,154	81	0	190	11,900	5,868	17,768
in percent (campus only)	54.4 %	43.3%	0.7 %	0.0 %	1.6 %	100.0 %		
in percent (campus and business travel)	36.4 %	29.0 %	0.5 %	0.0 %	1.1 %	67.0 %	33.0 %	100.0 %

* approximately 680,000 km/a (2016/17)
 ** based on CO₂ figures of the Federal Environmental Agency, only includes flights billed to the business travel unit



With its climate neutrality goal (which is very ambitious even by international standards), the Executive Board of Freie Universität Berlin has underlined the particularly urgent task of addressing the climate crisis. The university aims to develop decisive measures immediately. Its strategy for achieving climate neutrality by 2025 is guided by the following priorities:

1. In the area of energy efficiency and energy savings, a continuation of campus- and building-related optimization measures;
2. implementation of sustainable mobility to, on, and from campus – especially including the development of business travel policies concerning flight-related CO₂ emissions;
3. the expansion of renewable energies on campus; and
4. the compensation of unavoidable CO₂ emissions (e.g., flight emissions) through
 - credible compensation projects that stand up to the university’s scrutiny, such as closing the cycle of organic waste through plant carbon or the use of PV systems; and
 - the establishment of an ideas and innovation management system that will serve as a driving force for new projects and living labs. Its task will be to strengthen climate protection and sustainability in all areas of the university in research, teaching, knowledge transfer, and on the entire campus.

CLIMATE ACTION

FACTS AT A GLANCE

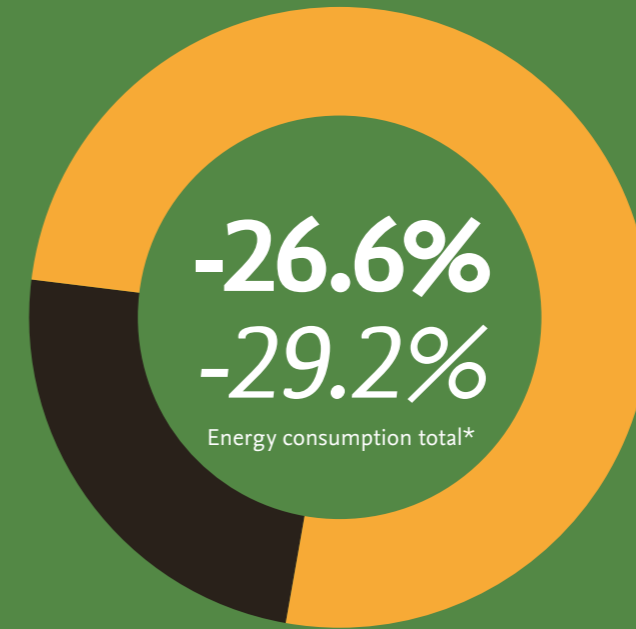
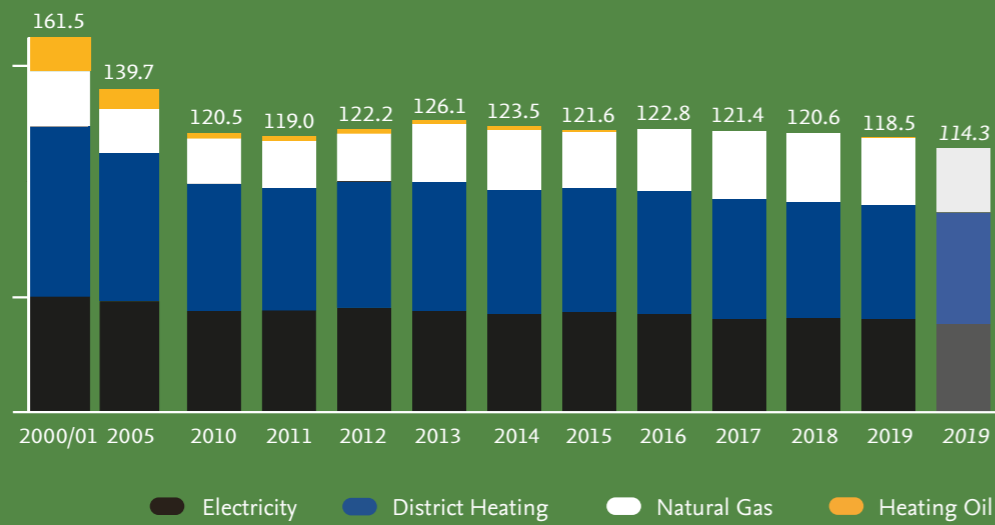
5.1 million €

Avoided costs due to the reduction of energy consumption 2019 compared to 2000/01 without increase in floor space

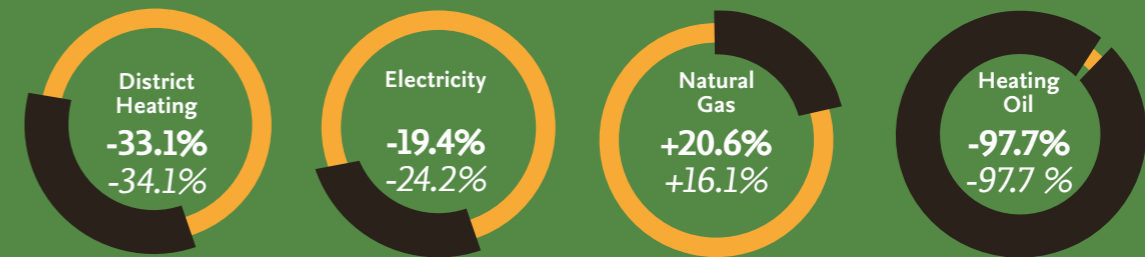
52.2 million €

Aggregate avoided costs due to the reduction of energy consumption 2003-2019 without increase in floor space

ENERGY CONSUMPTION 2000-2019
in M kWh/weather-adjusted data



REDUCTION IN ENERGY CONSUMPTION
between 2001 - 2019



9 Photovoltaic systems with a capacity of **657 kWp**

4 Combined heat and power plants with a capacity of **715 kWel**

-80%
Reduction in CO₂ emissions since 2000/01 including increase in floor space

-35%
Reduction in heat consumption since 2000/01 including increase in floor space

* The energy use includes the energy consumption of canteens and cafeterias of the Studierendenwerk Berlin.
italics: without increase in floor space

PROTECTING THE CLIMATE WITH PLANT CARBON

The project CarbonThink recycles organic waste materials and, in doing so, stores carbon

In its daily operations, Freie Universität Berlin generates large amounts of biogenic residues. These include lawn cuttings, foliage, and wood biomass from green space maintenance, as well as solid manure from the veterinary institutes. At present, subcontractors dispose of the residue, creating financial costs for Freie Universität Berlin. The CarbonThink project aims to determine to what extent organic residue can be processed in a way that makes more economic and ecological sense. In the process, the project has examined the possibility of converting the produced biomass into plant carbon and plant carbon substrates.

The production of plant carbon is a simple method of converting atmospheric CO₂ through plant biomass into a stable form for storage. In this case, plant carbon refers to the carbonization of biomass end products through pyrolysis. In addition to high-quality plant carbon, the process generates energy in the form of heat, which can be used to heat buildings.

Today, plant carbon technology benefits from a high level of attention at the international level. The *Intergovernmental Panel on Climate Change's (IPCC)* special report of October 8, 2018 was the first IPCC report to mention plant carbon as a promising *negative-emissions technology* for combating climate change.

A preliminary study examined the organic material flows and their current utilization as well as possible sites at Freie Universität for realizing the project. In addition, the CarbonThink project identified university and external stakeholders that could be relevant to the project's implementation.

The veterinary medicine campus in Düppel and the Botanic Garden Berlin are possible sites for carbonization plants. Most residue is produced at these sites, and the generated energy could be fed into the local heating system. The analysis showed that it is possible to convert almost the entire quantity of solid manure produced in Düppel (1,500



tons) into plant carbon. In addition, it is likely that wood from the district will be available and could be used at both sites through a cooperation with the green space department of Steglitz-Zehlendorf.

The operation of one pyrolysis unit per site could efficiently provide up to 5,000 h/a heat each for the local heating systems in Düppel and the Botanic Garden. In total, this could avoid almost 3,000 tons of current CO₂eq emissions. The produced plant coal would account for the largest share of this reduction, as carbon fixation is responsible for about 70 percent of savings.

In mid-August 2020, the results were presented to the Unit for Sustainability and Energy Management and the Sustainability and Climate Protection Steering Committee. The discussion of how the CarbonThink project can continue is ongoing.

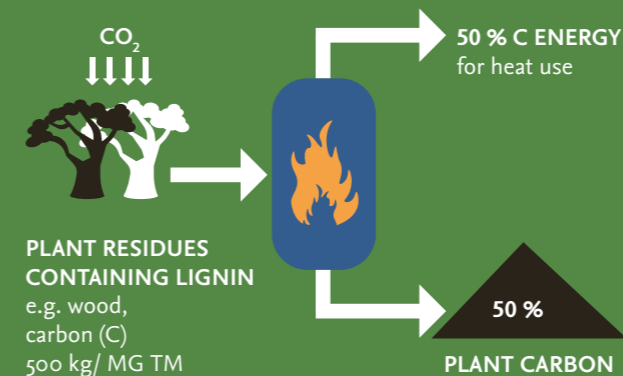


Figure 1: Carbonization potential of plant residues with regard to long-term carbon storage (C) and the availability of usable heat in decentralized circulation systems.

*Dr. Robert Wagner,
Department of Geosciences,
Geoecology Working Group*

MORE BIODIVERSITY ON CAMPUS

Interview with Sophie Lokatis, founder of the Blooming Campus initiative and PhD student at the Institute of Biology, and Alexander Caspari, geography student who leads the butterfly monitoring project

The *Blooming Campus* initiative is now almost two years old. Could you briefly describe how the idea came about?

SL Since 2017, the issue of insect mortality has received increasing mainstream attention. With the report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services in the summer of 2019, the public debate has intensified on the loss of biodiversity.

Together with Jens Rolff, professor of evolutionary biology, and students from the MA program in biodiversity, we considered a campus-wide pilot project with the objective of examining the FU's many green areas and their potential to support insects on the FU campus.

How did the *Blooming Campus* initiative come about?

SL We quickly noticed that the project was attracting a lot of interest. There are always

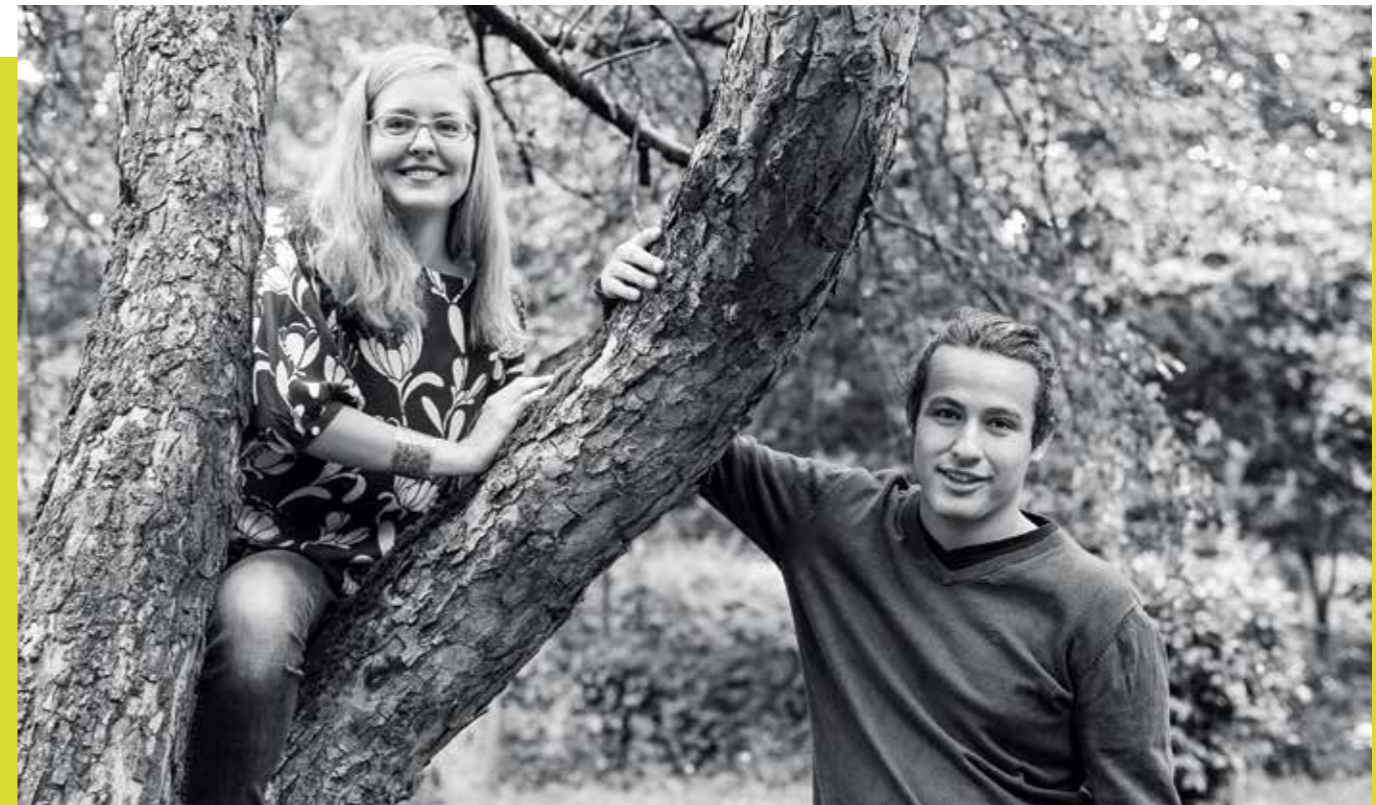
requests from university affiliates, for example, about whether a meadow can be laid out or beds planted in an insect-friendly way. *Blooming Campus* is an initiative of everyone who is committed, in whatever form, to more nature and biodiversity on campus.

Who is involved in the initiative?

SL The initiative includes the Unit for Sustainability and Energy Management, the Sustain it! initiative, and university affiliates from various departments. From the start, we have worked closely with the corresponding Engineering and Utilities Department regarding changes in the maintenance of the green spaces.

The initiative's objective is to improve biodiversity on campus. What have you done to achieve this goal?

AC We have achieved the most important and quickest successes through the transformation of the maintenance of green



areas. After one and a half years, the extensively tended areas spanned about two hectares, and the frequency of mowing on all green areas has been significantly reduced at Freie Universität Berlin.

Have the insects found their way back?

SL To learn more, the project is academically complemented by student theses or citizen science projects like the butterfly monitoring project initiated by Alexander. For her master thesis, Anja Proske documented the increase in the diversity of species and the number of insects in our areas. The findings are impressive and show how quickly one can be successful.

AC Our butterfly monitoring project provided evidence for 25 butterfly species and more than 630 individual animals. But to be honest, this is still not nearly enough. Common species are missing, like the small tortoiseshell, the peacock, and the map butterfly. It would also be good to

have rarer species here. Last year, we saw the Glanville fritillary in one area. One of our goals is to have this butterfly settle here.

What are your future plans?

SL Freie Universität has an important role model function. It is a global leader when it comes to sustainability and climate protection. However, the issue of biodiversity has basically been absent. Short-cut lawns are representative of this; they are worthless to insects and symptomatic of an understanding of nature that gives no room to nature and wilderness, certainly not directly on your doorstep. Changing that is our main goal.

The interview was conducted by Andreas Wanke, Unit for Sustainability and Energy Management

CONSERVING RESOURCES WITH SECOND-HAND GOODS

Interview on FUndgrube with Wolfgang Ackermann and Karin Heufelder, Unit for Sustainability and Energy Management



The FUndgrube was launched at the beginning of 2019 as a university-wide online platform to give, swap, or share used items. How did you come up with the idea?

WA We developed the idea for FUndgrube when the Department of History and Cultural Studies moved to the new building in 2015. Fifteen small buildings were emptied in one fell swoop, and we were quite disconcerted when we saw what we were expected to dispose of: not just furniture, but a large amount of tableware, lamps, and office supplies, with many still-usable things among them. In the spirit of sustainability, it seemed obvious to us to offer the used items to FU affiliates so that they could continue to use them.

How did you put the idea of the FUndgrube into practice?

KH On our website, we developed a virtual marketplace as a communication platform. It brokers furniture, machines, and other items from one user to the next and helps to avoid temporary storage.

What are the most sought-after items that can be found at FUndgrube?

KH In terms of quantity, mainly office supplies and toner end up in the FUndgrube. Interestingly, whiteboards, coat hooks, and desk lamps are the most sought-after items. These all go quickly, as do decorative materials, paintings, and Christmas decorations.

How have university affiliates accepted FUndgrube?

KH We received a lot of positive feedback for FUndgrube. Many people like the idea, and

there is high demand. The virtual platform on our Unit for Sustainability and Energy Management website is one of the site's most visited pages.

What does FUndgrube have to do with sustainability?

WA We want to save resources with FUndgrube; by passing on used items, we extend their useful life. This reduces disposal costs and, ultimately, avoids new purchases.

What are your plans for FUndgrube?

WA In the future, we want to set up a showroom as a central contact point for anyone who is interested. This would consolidate the transport for furniture storage and FUndgrube as well as the disposal of bulky waste. The FUndgrube showroom is primar-

ily needed as a highly visible and attractive on-campus exhibition space as well as a temporary storage facility for items that cannot be passed on directly. Additionally, our intention is to move the practice of reusing second-hand and surplus items into the center of the university to reach members of the campus community that have not come across our website yet.

The interview was conducted by Bettina Tacke, Unit for Sustainability and Energy Management

GLOBAL SUSTAINABILITY
NETWORKING

NET
WORKS

SHAPING THE GLOBAL SUSTAINABILITY DISCOURSE

Freie Universität Berlin considers itself an *International Network University* – and this aspiration is also practiced in the area of sustainability. The Sustainability and Energy Management Unit is interlinked with its strategic partner universities and is part of several international networks. The international exchange of experience and information between universities is increasingly important in the global scientific discourse on sustainability.

UNIVERSITY ALLIANCE FOR SUSTAINABILITY

In 2015, together with four strategic partner universities – the Hebrew University of Jerusalem, the University of British Columbia in Vancouver, Saint Petersburg State University, and Peking University – Freie Universität founded the University Alliance for Sustainability (UAS).

The alliance aims to use the partner universities' complementary strength to develop joint research and teaching projects. New research results, examples of best practices, and possible collaborations in research, teaching, and management are being discussed at annual conferences.



UAS CONFERENCES

166

Participants 2019

20	Countries	14
49	Universities	32
13	Institutions	10
54	PhD-students	57
74	Researchers	52
12	Practitioners	15

144

Participants 2018

Between 2015 and 2020, the network facilitated an intensive exchange of ideas and experience regarding all aspects of sustainability as part of a comprehensive DAAD-funded (German Academic Exchange Service) mobility program. Students, faculty, and administrative staff were given the opportunity to spend study and research stays at one of the four partner universities. Freie Universität Berlin also hosted many scientists, lecturers, and university managers from Canada, Israel, Russia, and China.

In the long term, Freie Universität Berlin intends to continue the University Alliance for Sustainability. In particular, the university is focusing on the digital development of the successfully established UAS conferences, which annually bring up to 170 academics from over 20 countries to FU Berlin.



INTERNATIONAL SUSTAINABLE CAMPUS NETWORK (ISCN)

Founded in 2007, the *International Sustainable Campus Network (ISCN)* is a global network of over 90 universities that serves as a platform for exchanging ideas and information on all aspects of sustainability at universities. *ISCN* members include renowned universities like Harvard University, ETH Zurich, the Massachusetts Institute of Technology (MIT), Yale University, and the University of British Columbia.

The network organizes annual international conferences, where Freie Universität Berlin regularly offers workshops and expert contributions regarding its experience in university sustainability management. Freie Universität Berlin has been part of the *ISCN's Advisory Committee* since 2016.

U7+

Freie Universität Berlin is one of 45 universities that joined forces in 2019 to form the *U7+ Alliance*. The initiative was launched during the French G7 presidency, and it is scheduled to meet every year around the time of the summit to promote the role of universities in the multilateral G7 agenda.

The universities have committed to stronger social engagement in several fields: advocacy on climate change and clean energy, addressing inequalities and social polarizations in their respective countries of origin, shaping the digital transformation, and educating students to become actively involved in civil society.

UNICA Green

UNICA is an association of capital city universities in Europe. Since these universities face comparable challenges, their common issues are addressed in regular meetings, workshops, and working groups. The network was co-founded by Freie Universität Berlin in 1990.

Freie Universität has also been a member of the *UNICA Green Working Group* since 2014. This group seeks to foster the systematic exchange of ideas and experience among the 53 member universities on questions of sustainable development. The working group organizes annual workshops on a variety of key issues.

UNA EUROPA

Founded in 2019, *Una Europa* is an alliance of eight European universities that aims to strengthen cooperation in research, education, and university governance. In addition to Freie Universität Berlin, the members of this higher education alliance are Università di Bologna, the University of Edinburgh, KU Leuven, Universidad Complutense de Madrid, Uniwersytet Jagielloński in Krakau, Helsingin Yliopisto in Helsinki, and Université Paris 1 Panthéon-Sorbonne.

Una Europa's partner universities focus their efforts on five key areas: European studies, sustainability, cultural heritage, health, and data science. Freie Universität Berlin has accepted the position of chair for sustainability and coordinates the Self-Steering Committee with the task of developing innovative joint educational formats in this field. Upon the initiative of Freie Universität Berlin, the partner universities intend to agree on common principles for sustainable university governance. Freie Universität Berlin is coordinating a *Una Europa* task force for this purpose.



PROMOTING EQUALITY,
DIVERSITY, AND HEALTH

WE

ACHIEVING SOCIAL SUSTAINABILITY

Gender equality, equal opportunities, and family friendliness are fundamental to Freie Universität Berlin's identity.

Gender equality policies are embedded in the current Equality Concept of Freie Universität 2015-2020 as cross-sectional tasks for the entire university. This includes achieving equal participation of all genders in science, research, education, and management; promoting internationally competitive gender research as an academic field and curricular content; and creating a family-friendly environment.

The *Berlin University Alliance* excellence cluster, which has been funded since 2019 and includes Freie Universität, has also defined diversity and equality as a cross-sectional task.

A core focus of the work on gender equality policy is to increase the university's proportion of female professors: At 37 percent in 2019, it was about the same as in 2016; this includes non-tenured professorships. The same applies to W3/C4 professorships, with a share of 29 percent. However, the proportion of women increased in W2 (from 40 to 43 percent) and junior professorships (from 42 to 45 percent). In total, the share of women in tenured professorships only rose from 32 to 34 percent. Raising the proportion of women in tenured professorships should be prioritized in the future.

A program established at Freie Universität in 2006 supports female academics on their way to a tenured professorship and has an approximate annual budget of one million euros. With the support of the *Berlin Equal Opportunity Program*, the university also finances junior professorships for female academics. Between 2017 and 2020, 22 temporary W2 and 12 junior female professor positions were funded. Eight of the temporary W2 female professors became permanent, and six temporary W2 professorships are currently in the process of being filled.



In addition to the promotion of women, Freie Universität adheres to a family-friendly university structure. In the case of appointments, it adopts a gender equality-oriented accompaniment and standardization of procedures. In 2019, regular events for female professors were launched to promote networking across departments and disciplinary cultures, as well as the discussion of the prospects and challenges that women face in science and academia.

Through the science day *#4genderstudies* in December 2019 and the campaign day against sexual harassment, discrimination, and violence in February 2020, the university addressed gender equality issues with a poster exhibition as well as performances, presentations, and panel discussions. In the future, a campus-wide task force on anti-feminism will be established to further advance gender equality.



WELCOME@FUBERLIN

The *Welcome@FUBerlin* program was launched in 2015. It allows refugees in Berlin and Brandenburg to continue or begin their academic studies. So far, more than 100 people each year have attended the program's German language and preparatory courses, which run from September to July. The participants come from 17 countries. The proportion of women was successfully increased to 30 percent in 2019. Attendees benefit from comprehensive counseling services and the volunteer work of students, who prepare them for everyday life at the university in the student Buddy Program.

SUPPORT FOR FAMILIES

The *Dual Career and Family Service* at Freie Universität Berlin offers various family-friendly services. It assists in the search for childcare and provides consultations and training for students and employees. With its family-friendly human resources policy and university structure, Freie Universität supports its affiliates in making work, studies, academic qualifications, and family obligations compatible. Since 2007, the university has been certified with the *audit family friendly university*. Moreover, it co-founded the organization *Familie in der Hochschule e.V. (family at university)* in March 2018.

UNIVERSITY SPORTS

University sports strengthen well-being and health in the university's work and living spaces. A variety of activities, such as the break express for students and employees, raise awareness and encourage university affiliates to integrate more movement into their everyday life on campus. In addition to the university's other offers in the health sector, university sports at Freie Universität aim to strengthen health resources and health-related self-competence while considering social disadvantage.

The motto *Sports for everyone and with everyone!* illustrates that sport as such can contribute to inclusion. People with different prerequisites and interests can meet and exercise together. In this context, values such as fairness and respect are in the foreground of community life.



5,376
Staff

2,960
Women **55 %**

2,842
Academic staff

Thereof woman **1,329 | 48 %**

2,534
Non-academic staff

Thereof woman **1,631 | 64 %**

PROGRAMS TO SUPPORT VULNERABLE AND ASYLUM-SEEKING SCIENTISTS

Freie Universität was the first German university to become a member of the *Scholars at Risk Network*. The university now hosts a total of 33 academics who are considered vulnerable. These academics receive support from various scholarship programs.

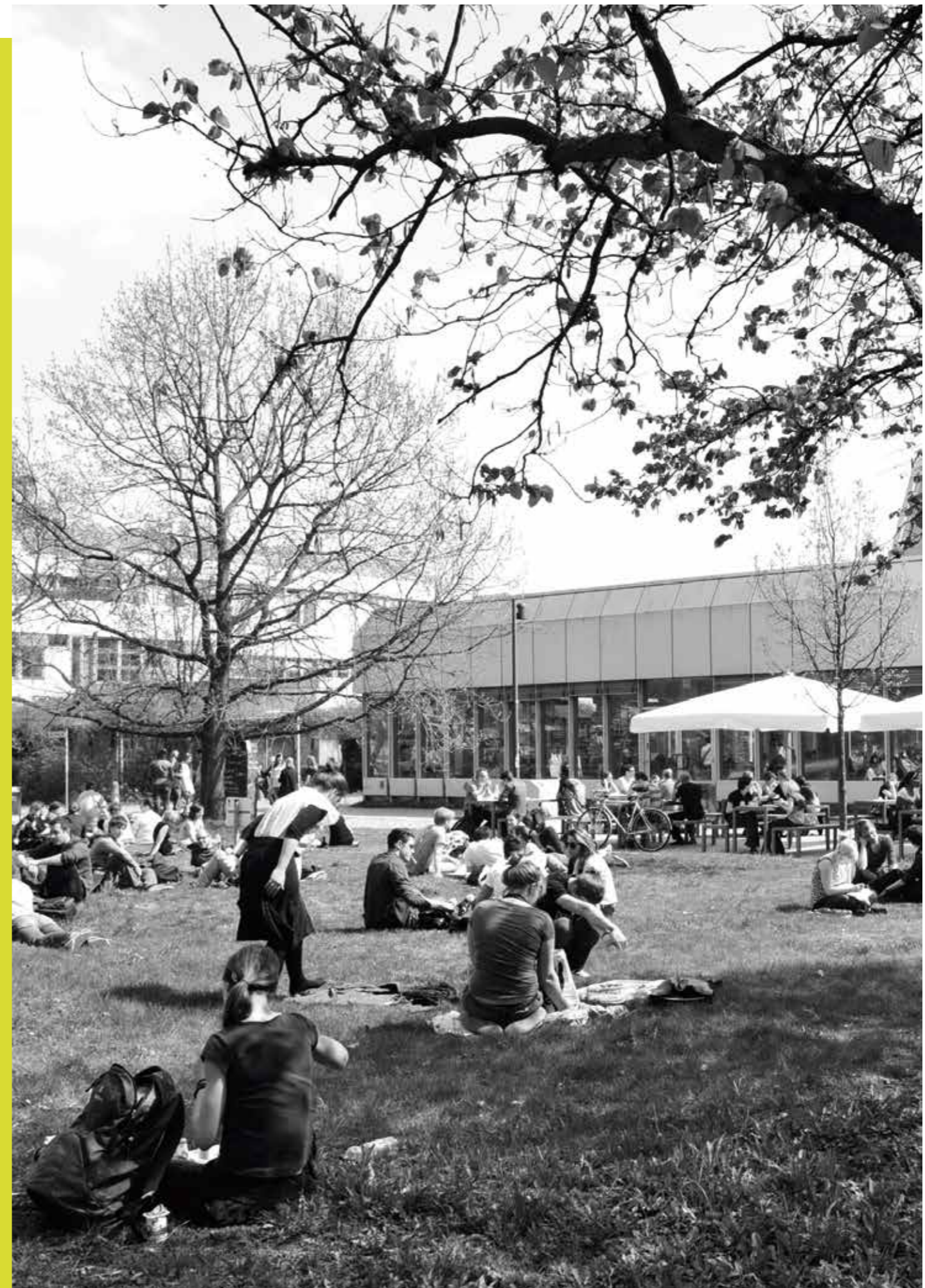
Since 2018, Freie Universität (along with three other institutions) has also been home to *Academics in Exile*, which promotes high-risk research topics in the humanities and social sciences. Freie Universität also coordinates the program *Academics in Solidarity*. Launched in 2018, this nationwide mentoring program serves asylum-seeking and vulnerable academics and currently comprises 109 registered mentees and 103 registered mentors. In 2019, Freie Universität Berlin hosted the first networking conference for *Academics in Solidarity*.

HUMAN RESOURCES DEVELOPMENT AND HEALTH MANAGEMENT

The qualification and motivation of employees are crucial to the success of Freie Universität as a place for cutting-edge research and dedicated teaching, as well as its status as a modern administrative institution with numerous service offerings. In this regard, the central elements are the job satisfaction and well-being of university staff. Personnel development and workplace health promotion are important components of the university's role as an employer.

With numerous measures, Freie Universität is committed to career advancement and qualification, the entry of new employees, and health promotion. Employees have access to a wide range of services. This includes various opportunities for qualification, offers for collegial exchange, professional development, and health-promoting work design. For instance, the university-wide day of university secretariats took place for the first time in 2020. The annual employee dialogues within the administration are also a part of these efforts.

Health management includes both health-focused advanced training courses and exercise opportunities and the annual day of health. Related to sustainable mobility, the operational health management office is responsible for university bike leasing, which will be available to employees starting in 2021.





SUSTAINABILITY
PROGRAM 2021 - 2023

GOALS



REVIEW OF THE SUSTAINABILITY PROGRAM 2018-2020

In 2018, Freie Universität announced the measures planned for 2018 to 2020 in the climate protection agreement and the sustainability report (also published in 2018). It included activities in all areas of the university, including the following:

- the establishment of an internal university marketplace platform to distribute discarded furniture and office supplies (*FUndgrube*, “*treasure trove*”);
- the development of a sustainability-oriented mobility strategy;
- the sustainability certification of new buildings of at least the BNB silver standard (quality rating system for sustainable construction);
- the launch of a new website on sustainable development with information on all university divisions;
- the introduction of the *Competence Area Sustainable Development* in the *General Professional Skills Courses (ABV)*; and
- the continuation of *Schools@University for Sustainability and Climate Protection*.

Most of the defined measures were implemented as planned, and none were cancelled. Five of the 26 measures were delayed and will be considered in the 2021-2023 sustainability program. This applies to the launch of the certification process in accordance with EMAS, the completion of the *Sustainability Toolbox*, and the project to centrally manage the printer infrastructure. These delays are due to staff and funding shortages and the restrictions related to the COVID-19 pandemic.

In addition, new activities have emerged to shape the future of the sustainability program, significantly expanding the 2018 program and requiring additional staff resources. These include the December 2019 *Climate Emergency Declaration* and the coordination of the newly established *Sustainability and Climate Protection Steering Committee*.

Furthermore, Freie Universität is one of the founding members of the European university network *Una Europa*, established in 2019. Sustainability is one of this network's five focus areas, and Freie Universität has accepted a position as its chair of sustainability. Since 2019, the *Blooming Campus* initiative has been working toward a novel green space management strategy that contributes to biodiversity. Finally, the *Competence Area Sustainable Development* was expanded to a greater extent than originally planned due to the strong response from students.

NEW PRIORITIES 2021-2023 SUSTAINABLE MOBILITY AND THE PROMOTION OF IDEAS

At the heart of the sustainability 2021-2023 program is the specification and implementation of the goals laid out in the *Climate Emergency Declaration*. This is to be done in a participatory process involving all relevant stakeholders.

The implementation of the sustainability-oriented mobility strategy passed by the Executive Board in 2019 will be one focus of activities of the new program. The strategy aims to accomplish the following goals:

- to promote bicycle- and pedestrian-friendly mobility, including appropriate traffic and campus infrastructure;
- to design a vehicle fleet that is as CO₂-free and cost-efficient as possible and includes a pooling concept; and
- to develop a pilot concept that combines business travel with the requirements of climate protection.

The mobility strategy is an important component of the university's climate protection policy as well as its campus-related development planning.

The second focus is the introduction of an ideas and innovation management system. This effort aims to systematically link issues of sustainable development with the university's institutional sustainability. Its core objectives include the following:

- to make sustainability and climate protection key issues, bringing them to the forefront of institutional practice;
- to promote the participation and motivation of students and employees;
- to strengthen the identification of students, employees, and alumni with Freie Universität; and
- to create incentive systems and opportunities for creative and innovative employees.

Ideas can be submitted to a university-wide proposal system, and will be reviewed by an advisory committee. Selected projects will receive start-up financing, and originators will be professionally supported in implementing their ideas. The best proposals will receive awards and will be featured in a public award ceremony.

Where possible, these innovative projects will be used in other areas of the university to contribute to organizational learning. In promoting campus-related climate protection projects, the ideas and innovation management system is also intended to make significant progress toward the two core issues of the *Climate Emergency Declaration*: including climate protection in all plans and decisions and to achieve climate neutrality by 2025.

**BETWEEN 2021 AND 2023
WE WILL PURSUE THE FOLLOWING GOALS AND KEY ISSUES**

Key aspects of sustainability activities through 2023	Implementing parties
GOVERNANCE AND PARTICIPATION	
Continue the Sustainability and Climate Protection Steering Committee (founded in 2020), as well as the subject-related working groups for teaching, research, campus, participation, transfer, mobility, and libraries	Steering Committee, working groups Coordination: Sustainability and Energy Management Unit (except for the working groups for libraries and transfer)
Introduction of a sustainability-oriented ideas and innovation management system	Sustainability and Energy Management Unit
Validation of the environmental management system of the university in accordance with EMAS (Eco-Management and Audit Scheme), including the continuation of the integrated work safety, health, and environmental management system (AGUM)	Whole university Coordination: Sustainability and Energy Management Unit
Establish a unit for sustainable construction and a sustainability officer in the Division for Engineering and Utilities and Unit II C	Division for Engineering and Utilities Unit II C, Division for Finances, Purchasing, and Position Management
Conduct ideas and implementation workshops in the Central University Administration (ZUV) and the university departments to implement the Climate Emergency Declaration	Sustainability and Energy Management Unit Central University Administration and university departments
Develop a diversity plan, including the expansion of governance and work structures and contact points in the fields of diversity and antidiscrimination	Unit Strategic Planning and Reporting Diversity network
RESEARCH, TEACHING, AND KNOWLEDGE TRANSFER	
Continue the Competence Area Sustainable Development in General Professional Skills Courses	Sustainability and Energy Management Unit
Continue the education initiative Schools@University for Sustainability + Climate Protection	Freie Universität Berlin

Key aspects of sustainability activities through 2023	Implementing parties
Introduce a sustainability module in the supplementary area of teacher training-related vocational science for primary schools within the framework of the bachelor's degree programs for the teaching profession	Dahlem School of Education Sustainability and Energy Management Unit
Organize additional training for lecturers on the teaching and learning concept of Education for Sustainable Development (ESD)	Sustainability and Energy Management Unit Institute Futur Project SUPPORT
Introduce and further develop a sustainability toolbox – an online teaching and learning platform with information on sustainability topics in teaching, research, and campus management	Sustainability and Energy Management Unit CeDiS
Regularly implement continuous education opportunities on climate neutrality, AGUM, EMAS validation, and ideas and innovation management for employees	Sustainability and Energy Management Unit Center for Continuing Education
Implement participatory sustainability formats such as periodic University Days, teaching events, art labs, sharing projects, and community	Sustain it! Initiative for Sustainability + Climate Protection
Continue the Blooming Campus project in cooperation with the university's green space management team	Blooming Campus Initiative Division for Engineering and Utilities Institute of Biology
Continue and implement the joint project FUBIC (All Electricity for Technology Quarters), funded by the Federal Ministry for Economic Affairs and Energy	Sustainability and Energy Management Unit WISTA Management GmbH (project management) RWTH Aachen (cooperation partner)
R&D proposal for the continuation of the CarbonThink project	Faculty of Geosciences Sustainability and Energy Management Unit Division for Engineering and Utilities Faculty of Veterinary Medicine BGBM (Botanic Garden and Botanical Museum)

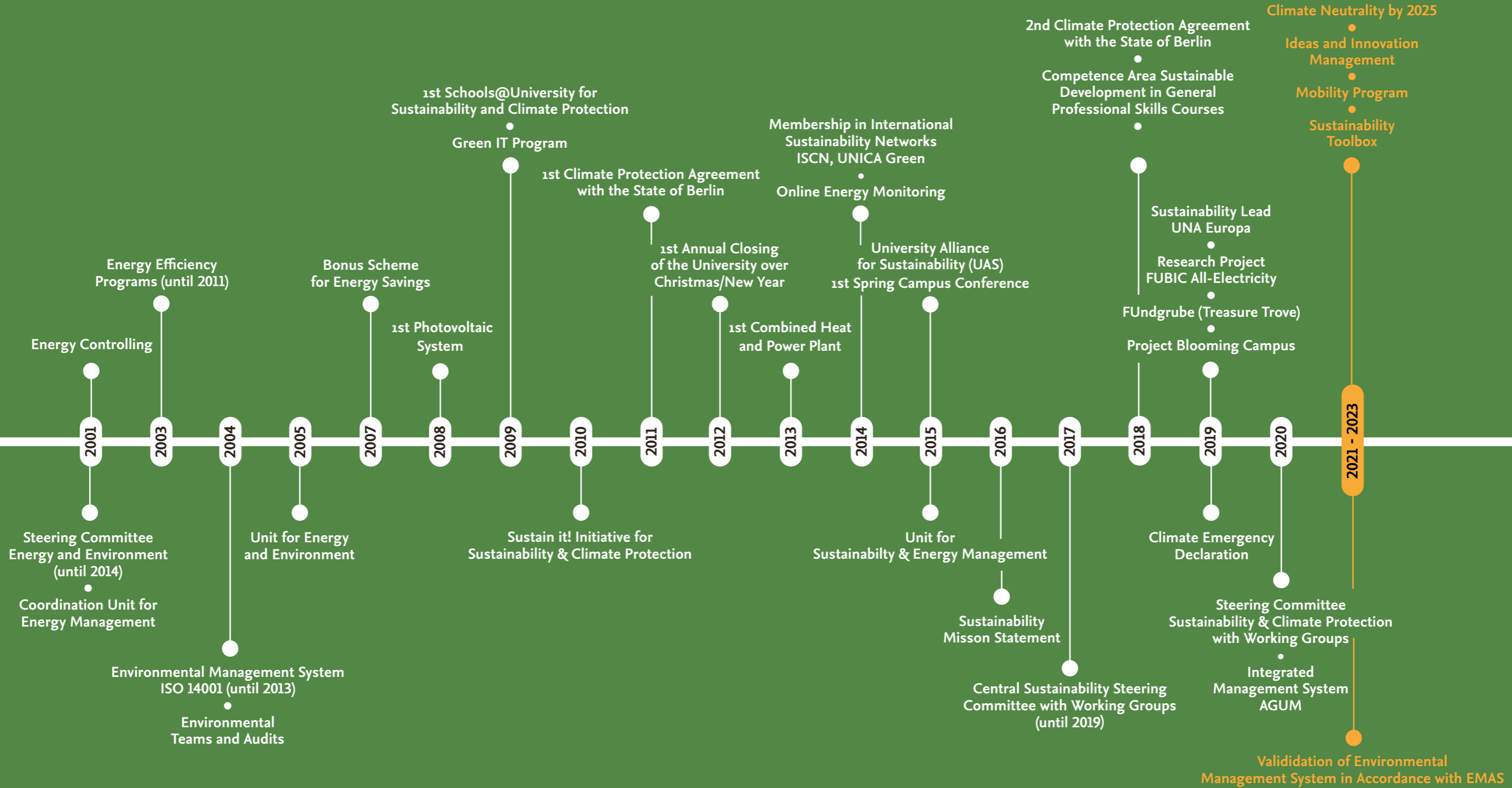
Key aspects of sustainability activities through 2023	Implementing parties
CAMPUS MANAGEMENT	
Continue with the energy efficiency measures on campus and in buildings (online energy monitoring, technical-structural energy efficiency measures, energy-saving bonus system, university closing, etc.) with the aim to reduce the university's energy consumption by a further 10 percent by 2025 (compared to 2016) on an area-wise basis	Sustainability and Energy Management Unit Division for Engineering and Utilities Whole university
Assess further locations for photovoltaic and solar thermal plants	Division for Engineering and Utilities Sustainability and Energy Management Unit
Certification of new buildings in accordance with the silver standard (at minimum) of the Sustainable Construction of the German Federal Government (BNB) Rating System New construction in accordance with the BNB gold standard of the university building at Königin-Luise-Str. 28-30	Division for Engineering and Utilities
Completion of the reconstruction of the chemistry building Arnimallee 22 and beginning of the reconstruction of the chemistry building Takustraße 3, reducing heating consumption by at least 3 percent	Division for Engineering and Utilities
Develop and implement a sustainable mobility plan for a pedestrian- and bicycle-friendly campus	Sustainability and Energy Management Unit Central Unit for Occupational Health Management, University Sports
Examine the mobility structures and processes to, from, and on campus	Sustainability and Energy Management Unit
Develop an EventN toolbox to plan and implement sustainable events at Freie Universität Berlin	Sustain it! Initiative for Sustainability + Climate Protection

Key aspects of sustainability activities through 2023	Implementing parties
Develop a concept to reduce and optimize the FU vehicle fleet and transition to e-mobility	Unit IIC, Division for Finances, Purchasing, and Position Management, Division for Engineering and Utilities (charging infrastructure) Sustainability and Energy Management Unit
Implement a demand-oriented central management strategy for printers and copiers with the aim of halving the number of devices across the university while saving paper and energy	Unit IIC, Division for Finances, Purchasing, and Position Management
Develop a university-wide policy for the reduction of CO ₂ emissions from business travel	Subdivision IA, Personnel Office for Academic Employees and Civil Servants, Travel Costs, Severance Payments Sustainability and Energy Management Unit Work-Related Air Travel Working Group
COMMUNICATION AND NETWORKS	
Actively participate in national and international sustainability networks like HOCH ^N , ISCN, and UNICA Green	Sustainability and Energy Management Unit
Develop and implement a sustainability campus tour of exemplary sustainability projects	Sustainability and Energy Management Unit
Publish regular sustainability reports	Sustainability and Energy Management Unit
Coordinate the key area of sustainability in the European university network Una Europa and the task force for sustainability and climate protection; develop teaching pilots	Sustainability and Energy Management Unit Vice President for International Affairs (VP2) Leadership of the Una Europa Sustainability Self-Steering Committee Division IV: International Affairs (CIC)
Continue the University Alliance for Sustainability (UAS); establish digital event formats	Sustainability and Energy Management Unit

FROM ENERGY TO SUSTAINABILITY MANAGEMENT

MILESTONES

GOVERNANCE



PUBLISHING DETAILS

Published by the
Executive Board of Freie Universität Berlin

Unit for Sustainability and Energy Management
Schwendenerstraße 17
14195 Berlin
phone: +49 30 83855436
Email: sustainability@fu-berlin.de
www.fu-berlin.de/nachhaltigkeit

TEXT

Andreas Wanke, Bettina Tacke, Nora Große, Katrin Schweigel,
Sustainability and Energy Management Unit

WITH CONTRIBUTIONS FROM

Achim Brunnengräber, Environmental Policy Research Centre | Dr. Annette Lewerentz, Division Research | Christian Mundhenk, University Sports Center | Dr. Dirk Wenske, Division Research | Esther Hülsewede, Gender Equality Office | Dr. Florian Kohstall, Welcome to Freie Universität Berlin program | Fridays For Climate Justice-Initiative, Freie Universität Berlin | Gabriele Rosenstreich, Strategic Planning and Reporting | Heike Pantelmann, Margherita von Brentano Center for Gender Studies | Jeannine Marquardt, Department of Biology, Chemistry, and Pharmacy | Karola Braun-Wanke, Freie Universität Berlin | Lilith Wanner-Mack, Division Personnel | Lea Lentgraf, Institute for Latin American Studies | Marion Immel, Department of Biology, Chemistry, and Pharmacy | Dr. Mechthild Koreuber, Gender Equality Office | Melanie Utecht, Division Personnel | Miriam Juchem, Dual Career & Family Service | Tobias Haas, Environmental Policy Research Centre | Melanie Quilitz, Unit for Sustainability and Energy Management | Silke Vorst, Department of Biology, Chemistry, and Pharmacy | Prof. Dr. Petra Skiebe-Corrette, Department of Biology, Chemistry, and Pharmacy | Dr. Robert Wagner, Department of Earth Sciences | Rainer Hoffmann, Strategic Planning and Reporting | Steffen Terberl, Division Research | Prof. Dr. Tanja A. Börzel, Department of Political and Social Science

EDITING

Bettina Tacke, Andreas Wanke, Katrin Schweigel

EDITORIAL DEADLINE

November 2020

PROOF READING

Ute Schäfer, Berlin

TRANSLATION

Ulrike Bialas, Berlin

DESIGN

Design & Fotografie Susanne Wehr, Berlin | susannewehr.de

PHOTOS

Pages 4, 7, 11, 17, 31, 46, 55, 68, 73, 77: Bernd Wannemacher | Office of News and Public Affairs | Freie Universität Berlin
Page 5: Kay Herschelmann
Page 19: Fridays for Climate Justice | Freie Universität Berlin
Page 26: Patricia Kalisch | Freie Universität Berlin Alumni
Pages 29, 41, 47, 59, 61, 63: Susanne Wehr
Pages 27, 37: David Ausserhofer
Pages 48/49: Karola Braun-Wanke | Freie Universität Berlin
Pages 53, 67: Unit for Sustainability and Energy Management | Freie Universität Berlin
Pages 22, 26/27, 38, 45, 49, 75: Michael Fahrig
Page 74: Patricia Kalisch

PRINTER

Umweltdruck Berlin
Printed on RecyStar Polar
100% recycled paper, Blue Angel - The German Ecolabel
Blue Angel for print products, RAL-UZ 195



APPENDIX

		2000	2005	2010	2015	2017	2018	2019
Annual government funding [M €]		267.6	292.4	274.2	311.6	328.6	339.7	351.0
Third-party spending (total) [M €]		36.7	46.1	106.3	126.6	131.5	136.7	140.0
Students [number]	total	35,283	31,398	32,043	35,413	36,771	37,483	37,308
	women	53 %	59 %	58 %	59 %	59 %	59 %	60 %
PhD students	total	2,351	2,260	3,902	4,406	4,135	3,918	3,792
International students	total	5,481	4,765	6,042	7,358	7,768	7,975	7,904
Staff [number]	total		4,497	4,863	5,143	5,177	5,260	5,376
	women		53 %	56 %	57 %	56 %	55 %	55 %
Non-academic staff	total		2,283	2,216	2,357	2,341	2,415	2,534
	women		67 %	67 %	67 %	67 %	65 %	64 %
Academic staff	total		2,214	2,647	2,786	2,836	2,845	2,842
	women		35 %	45 %	47 %	47 %	47 %	48 %
Professors	total		433	474	548	562	559	559
	women		20 %	31 %	38 %	37 %	37 %	37 %
Tenured professorships	total		372	309	319	343	344	359
	women		19 %	25 %	31 %	32 %	32 %	33 %
Temporary professorships			0	31	54	58	52	45
Junior professorships			30	77	106	93	89	78
Guest professorships				57	69	68	75	77
Student employees [number]				1,662	1,713	1,714	1,678	1,541
Adjunct teaching staff [number]			1,325	1,461	1,094	945	935	941
Number of sustainability-related research projects (out of all projects)						457 (1,546)		665 (1,796)
Number of sustainability-related courses (out of all courses)						641 (4,213) WiSe 2017/18	653 (4,498) WiSe 2018/19	678 (4,159) WiSe 2019/20

		Baseline	2005	2010	2015	2017	2018	2019
Energy consumption* (weather adjusted) [MWh]	total	161,462 (2000/2001)	139,705	120,529	121,627 117,431	121,362 117,059	120,555 116,137	118,545 114,301
	reduction to baseline		13.5 %	25.4 %	24.7 % 27.3 %	24.8 % 27.5 %	25.3 % 28.1 %	26.6 % 29.2 %
Electricity		50,222	48,059	43,716	43,472 41,216	40,513 38,116	40,825 38,360	40,472 38,048
District heating		73,399	63,612	55,152	53,345 52,577	51,608 50,828	50,079 49,235	49,101 48,347
Natural gas**		23,774	19,034	19,251	24,303 23,131	29,077 27,951	29,351 28,242	28,680 27,631
Heating oil		14,067	9,000	2,410	507 507	165 165	301 301	292 292
Energy cost savings [M €] (calculated with the energy prices of the respective year)	annual reductions compared to baseline		1.22	3.19	3.45 3.97	3.63 4.16	3.84 4.40	4.51 5.12
	cumulative		2.40	14.72	32.87 34.24	40.21 42.65	44.05 47.05	48.56 52.17
CO₂-emissions equivalent to provider information & power supply contract [t]	total	57,194	26,160	12,951	13,075 12,736	11,234 10,936	11,710 11,406	11,463 11,178
	reduction to baseline		54.3 %	77.4 %	77.1 % 77.7 %	80.4 % 80.9 %	79.5 % 80.1 %	80.0 % 80.5 %
Electricity		38,118	10,717	0	0	0	0	0
	reduction to baseline		71.9%	100%	100%	100%	100%	100%
CO₂-emissions per square meter of building area [kg/m ²]		107.9	50.1	24.1	23.1	19.8	20.7	20.3
Water use [m ³]	total	283,009 (2004)	272,016	198,302	218,838	225,516	254,857	243,600
Water costs [M €]	total	1.556 (2004)	1.642	1.499	1.382	1.397	1.491	1.405
Waste costs [M €]	total	0.428 (2004)	0.454	0.348	0.339	0.326	0.338	0.373
Residual waste		0.151	0.142	0.142	0.159	0.169	0.181	0.192
Hazardous waste (chemical waste, bulky waste, electronic scraps etc.)		0.236	0.275	0.203	0.180	0.138	0.128	0.158
Net floor space [m ²]		530,000 (2000/2001)	522,000	537,000	565,000	568,000	567,000	566,000

Numbers in *Italic*: without increase in floorspace

* The energy use includes the energy consumption of canteens and cafeterias run by the Studierendenwerk Berlin.

** including biogas in 2017

SUSTAINABILITY REPORT 2020 FREIE UNIVERSITÄT BERLIN

Published by the
Executive Board of Freie Universität Berlin

Unit for Sustainability and Energy Management
Schwendenerstraße 17
14195 Berlin
phone: +49 30 83855436
email: sustainability@fu-berlin.de
www.fu-berlin.de/nachhaltigkeit

The Sustainability Report 2020 of Freie Universität Berlin is based on the principles of the German Sustainability Code for Higher Education Institutions from the German Council for Sustainable Development (Declaration of Conformity of Freie Universität Berlin).