

Sustainability at the University of Bonn in 2024

A Green Office Reader



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# FOREWORD BY THE VICE RECTOR

We are delighted to present to you this second, updated edition of the University of Bonn's Sustainability Reader. The editors from the Green Office have once again taken great care in putting together this overview of the sustainability-related projects and initiatives in place at our University in order to give you, the reader, a comprehensive insight into current developments.

Much has gone on since we published the first edition, particularly as a result of setting out the University's own Sustainability Strategy. Formulated in a participatory process, this strategy is underpinned by our "Working Together for Sustainability" mission statement: Specific sustainability objectives and wide-ranging measures were developed and compiled across the

University with the aid of numerous formats for participation (such as the Sustainability World Café, the Un(i)conference and the ideas inbox). These were then ranked by Team N (N for "Nachhaltigkeit," or "sustainability" in German) together with the BOOST working group and published as a strategy paper, a "living document" that is designed to be developed further and updated at regular intervals. This is because the effectiveness of the measures taken to achieve the objectives is assessed on an ongoing basis so that changes or adjustments can be made if need be.

The Green Office's Sustainability Reader will keep you up to speed on developments and progress at our University and serve as a work of reference for all the many ways in

which you as a student or member of staff can contribute and get involved in order to actively help shape the sustainable transformation at our University. Whether you choose to join a working group on a certain topic, make use of the sustainability ideas inbox or assist with specific projects, we want your ideas and your commitment. I hope that this reader will give you some guidance and inspiration so that, together, we can make the University of Bonn an even more sustainable place.

**Professor Annette Scheersoi** Vice Rector for Sustainability





# WHY HAVE A SUSTAINABILITY READER?

Transforming society sustainably into a way of living within our planetary boundaries that can meet our needs without destroying the foundations for our future life is undoubtedly the biggest challenge of our time. Climate change, in particular, is an existential crisis of humanity that is threatening our very livelihoods, and its impact has been felt for a long time now - including here in Germany. Extreme weather events such as the flooding in the Ahrtal valley in 2021, heatwaves in excess of 40 degrees Celsius and increasingly frequent dry summers that are harming our agriculture in particular are evidence that the climate crisis is no longer merely an abstract danger to be faced some time in the future. It is real and is already having an impact on our lives. At the same time, the urgency of the situation frequently leaves us feeling hopeless and helpless. Faced with such a huge challenge, it often feels as if any efforts - whether

individual or collective – will not be enough to stave off impending catastrophe. Yet it is precisely at times like these that we must not allow ourselves to be frozen in our tracks. The risk of critical climate "tipping points" being reached has not gone away, and the extreme consequences for the environment will only get worse if we fail to act.

Passing these critical tipping points could trigger irreversible changes in the global climate system, such as the melting of the Greenland and Antarctic ice sheets, which would cause sea levels to rise considerably. Another irreversible event is the potential collapse of the Amazon rainforest, which is regarded as one of the largest carbon sinks on Earth. Besides destabilizing the global climate, these events would also exacerbate extreme weather conditions such as more frequent and more intense heatwaves, droughts and flooding.

As a University of Excellence, the University of Bonn acts in line with scientific findings and has set itself the goal of making its operations climate-neutral as quickly as possible. It is also focusing increasingly on promoting sustainability and sustainability research in teaching and learning. A University-wide **Sustainability Strategy** was devised in working groups made up of representatives from different status groups and was published in 2024. At the same time, many members of the University remain committed to making their departments, institutes, divisions and sections more sustainable and equitable.

With this second edition of the Sustainability Reader, we want to give all members of the University of Bonn the opportunity to learn more about sustainable development at their University in a clear and compact form. The reader provides an overview of the latest progress made, shows where the University has got to on its sustainability journey and brings together relevant information on working groups, initiatives, projects and events.



From left to right: Lennia Tilgner, Kathrin Demel and Lynn Spaeder

We want to encourage people to get active themselves, get involved and help shape the process of sustainable transformation, because being proactive and taking part will not only have a positive impact on our shared future – it also brings encouragement and hope.

Concrete action and engagement at local level will transform this feeling of power-lessness into energy and drive and an awareness that change is possible.

## If we work together, we can drive the sustainable transformation forward!

We hope you enjoy reading this second edition of the Sustainability Reader!

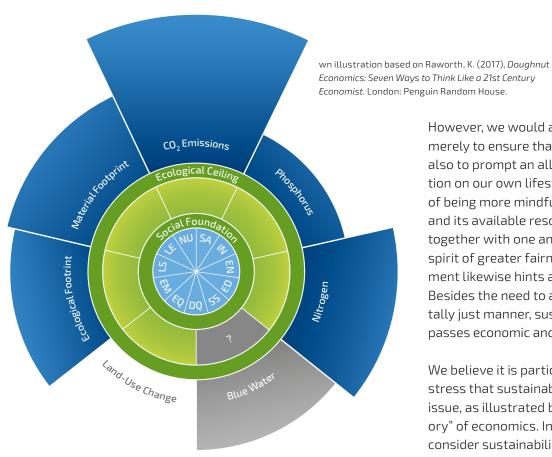
The Green Office

## OUR UNDERSTANDING OF SUSTAINABILITY

Debates over planetary boundaries, global heating and socio-political processes of transformation toward sustainable development are dominating talk shows, newsreels and our daily lives. Yet in the midst of big speeches about a major turning point and debates over climate targets, we sometimes forget to agree on the basics. For instance, what exactly do we understand by "sustainability?"

If you look up "definition of sustainability" online, you are offered no fewer than four different explanations: 1. "Sustainable" means that something continues to exist or have an effect for a prolonged period of time. 2. Sustainability is an important principle for the future that 3. is geared toward ensuring that future generations do not have less raw materials and food than we do today. 4. Sustainability encompasses environmental protection, innovative technologies, prosperity and social progress.

Thus it is by no means easy to come up with a precise definition of sustainability; at the very least, it is hard to sum it up in a single sentence. As far as we are concerned, all these explanations are different aspects of the concept of sustainability. Sustainability is clearly and unquestionably an important principle for the future. At the same time, however, it is a critical concept that should guide our actions in the present, especially in terms of their implications for the future. The sustainability perspective also helps us reflect on our past actions. The abovementioned objective echoes the classic mainstream definition of sustainability taken from the 1987 Brundtland Report, according to which sustainable behavior means ensuring that present generations only consume enough resources to meet their needs so that future generations will be equally able to meet their own needs.1



LS Life Satisfaction

IN Income Poverty

DQ Democratic Quality

LE Life Expectancy

EN Access to Energy

**EQ** Equality

**NU Nutrition** 

ED Education

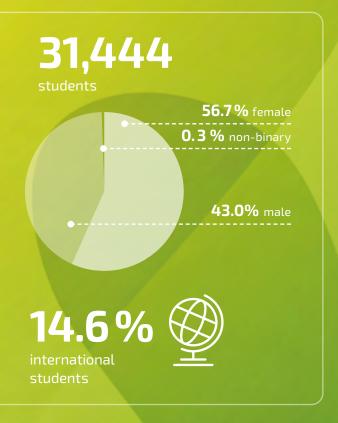
EM Employment

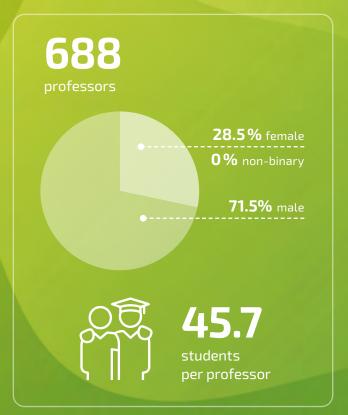
However, we would add that the aim is not merely to ensure that needs can be met but also to prompt an all-encompassing reflection on our own lifestyle with the intention of being more mindful of our environment and its available resources and living together with one another in society in a spirit of greater fairness. The final statement likewise hints at a holistic view:

Besides the need to act in an environmentally just manner, sustainability also encompasses economic and socio-cultural aspects.

We believe it is particularly important to stress that sustainability is a cross-cutting issue, as illustrated by the "doughnut theory" of economics. In other words, we do not consider sustainability to be a discrete phenomenon that exists apart from other values or as an explicitly environmental issue but rather as a dimension that spans all areas of society. This also means recognizing that all these areas – from politics and institutions such as universities through to private individuals – can and must help bring about sustainable development.

# THE UNIVERSITY OF BONN IN FIGURES





5,153

members of academic staff



1,904

technical and administrative staff



€ 850.4 million in the University

budget





597,498 m<sup>2</sup>

of space used

(the size of 84 football fields)



237
subjects
and degrees

Sources: University of Bonn (2024): data from the Annual Report of the Rectorate 2023, research conducted within the University by the Green Office





electricity consumed

2022

## 49,600 MWh 2023 46,600 MWh

#### Part of a sustainable network!

The University of Bonn is a member of the German Association for Sustainability at Universities (Deutsche Gesellschaft für HochN), the International Sustainable Campus Network (ISCN) and Humboldtn ("Humboldt to the power n"), the sustainability initiative of the universities of



diesel and gasoline consumed



56,228 l

57,548 L

2022

7,992,000

sheets of copy paper

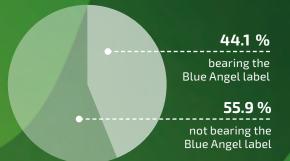


2023

7,018,500

sheets of copy paper







3,786

dormitories provided by the Studierendenwerk Bonn in 29 buildings

Blue Angel label

## € 41 million

in BAföG funding for

recipients





## 1,2 million

meals served by the Studierendenwerk Bonn in four canteens





BOOST stands for "Bonn Program for Sustainability Transformation" and brings together all the sustainability activities under way at the University of Bonn.

The program is geared toward fostering a sustainability culture at the University by encouraging participation, networking and student engagement, an approach that is reflected in the "Working Together for Sustainability" mission statement. Specifically, this participatory whole-of-institution approach builds on the mission statement, which was formulated together with representatives of all stakeholder groups at the University and which defines strategic objectives and fields of activity. BOOST thus represents all the individuals, measures and projects involved in sustainability at the University of Bonn and promotes broad-based participation in order to raise awareness of the need for a sustainability transformation and make more people take more responsibility in this regard.

The **Sustainability Strategy** was developed in a University-wide participatory process on the basis of the mission statement. The strategy is constantly being developed further to adapt it in light of changing circumstances and new insights. Working groups ("BOOST sub-groups") focusing on specific topics – teaching, research and operations – set operational targets and define tangible measures and indicators for achieving them. All members of the University are invited to get involved in developing the strategy via corresponding tools, such as the Sustainability Ideas Inbox.



#### Team N

Team N is responsible for coordinating the University's transformation process and aims to foster a sustainability culture here. It is made up of the Vice Rectorate for Sustainability, the Sustainability Unit and the student-led Green Office.

## Vice Rectorate for Sustainability and Sustainability Unit

The Vice Rectorate for Sustainability and Sustainability Unit began their work in May 2021. Professor Annette Scheersoi, the first Vice Rector for Sustainability at the University of Bonn, is supported by her advisor Ruben Greif. The Sustainability Unit is led by Jennifer Sobotta. A project-based post has also been set up within the unit to focus on education for sustainable development. The team has set itself several goals: embedding sustainability in the fabric of the University; making sustainability issues more



Governance for Sustainnability

visible across the University; and supporting and organizing sustainability-related initiatives and projects. One of its key tasks has been to formulate the

Sustainability Strategy together with representatives from all the University's status groups within the BOOST working group, and it will now turn its attention to developing this further. The team organized the first-ever sustainability-themed campaign month in September 2021. These months are now a quarterly fixture in the calendar and invite all members of the University to take part in the many varied sustainability-related activities on offer, run their own campaigns and host events.

#### **Green Office**

The Green Office is the student-led sustainability office at the University of Bonn. As the central point of contact for everything associated with sustainable development, it is geared toward fostering dialogue among and between students, teachers and all other University staff and embedding the issue of sustainability in the fabric of the entire University. It is part of an international movement that has now come together to form a network of Green Offices

from all over the world. Part of Team N, the Green Office works closely with the Vice Rectorate for Sustainability and the Sustainability Unit and also serves as a sounding board for students' ideas, suggestions and constructive criticism concerning sustainable development.

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#### **BOOST** working group

The BOOST working group was set up to promote networking. Its members, representing all the status groups at the University, come together to promote the entrenchment of sustainability at a structural level and drive the transformation. process at the University. The working group is coordinated by Team N, which helps to design and support its activities and measures. Its work is underpinned by the "Working Together for Sustainability" mission statement, which was devised in a participatory process and which sets out the strategic objectives and fields of activity governing sustainable development at the University of Bonn.

### Faculty contacts

Every faculty has had a named contact for sustainability matters since 2024. In this section, they introduce themselves for the first time:

#### Jeannine Bischoff

#### **Faculty of Arts**

"How do you think students and staff should be promoting sustainability at the University of Bonn?"

"We can only make a success of sustainability at our University if we all work toward it together on an equal footing. This challenging transformation into a sustainable institution will require dedication and, in particular, enthusiasm from every single one of us. We in the Faculty of Arts have embraced a participatory process in which everyone who's keen to get involved is cordially invited to share their opinions, views and contributions."

Back row, from left to right:
Jeannine Bischoff,
Dr. Birgit Hoegen,
Prof. Dr. Matthias Braun
Front row, from left to right:
Carl Erich Kesper,
Jun-Prof. Dr. Anna Marie Riedl,
Christina Böhm

#### Dr. Birgit Hoegen

## Faculty of Agriculture, Nutritional, and Engineering Sciences

"What role does sustainability play in your area of responsibility?"

"Naturally, sustainability is at the heart of the research and teaching being done in the Faculty of Agricultural, Nutritional, and Engineering Sciences. One of the things that sets it apart is the opportunity it offers to take findings from the field of renewable raw materials and put them straight into practice. For instance, various construction materials developed on the Klein-Altendorf Campus based on renewable raw materials are being used in new buildings on the Poppelsdorf Campus."













Governance for Sustainnability

#### **Professor Matthias Braun**

#### **Faculty of Protestant Theology**

"What small steps are you yourself taking to live or work more sustainably?

"Frankly, by learning a great deal from many people I come into contact and by reminding myself that finding sustainable solutions is fun."

#### Carl Erich Kesper

#### **Faculty of Law and Economics**

"What inspired you personally to devote some of your time to sustainability at our University?"

"My parents had first-hand experience of the shortages during and after the Second World War as youngsters and young adults. Wastefulness was always completely anathema to them. That's probably why I find it so hard to stand by and watch our society being so wasteful with the resources and capacities of this world. Less to their own detriment, incidentally, than to the detriment of humanity as a whole and, in particular, that of future generations. How much longer can this go on?"

#### Jun-Prof. Dr. Anna Maria Riedl

#### Faculty of Catholic Theology

"What inspired you personally to devote some of your time to sustainability at our University?"

"As a theologian and ethicist, I believe that the concept of sustainability always contains within it the idea of creation. And creation I see as a symbol for how we deal with the world around us – this world being something whose beginning and, hopefully, whose end is not up to us to determine but with which we are permitted, to some extent, to share life in all its infinite wisdom and beauty. [...]"

#### Christina Böhm

#### **Faculty of Medicine**

"What role does sustainability play in your area of responsibility?"

"Health care is one of the largest sectors of the German economy. It consumes a lot of energy, generates a lot of greenhouse gases and is said to be the fifth biggest producer of waste. Climate change is also having a serious impact on our physical and mental health. Health can be regarded as the key to the general sustainable development of society and the economy, not least because taking action to mitigate climate change ultimately means protecting and promoting people's health. This makes the role played by medicine a highly responsible one. [...]"

## **Activities (of the hands-on kind)**

From the Sustainability Day to the quarterly Campaign Months, there are plenty of opportunities to get involved and lend a hand. This is where your ideas are turned into concrete action and where we can shape a more sustainable future together.







Upcycling workshop in the Bundeskunsthalle inspired by its Kant exhibition and entitled "Illumination: making lamps from PET bottles, vinyl, CDs and more" © Volker Lannert Activities (of the hands-on kind)





#### Left:

Bug hotel workshop © Hannah Lutterbeck

#### Bottom:

Sustainability Day 2024, featuring an army of leading sustainability figures and activity stands, competitions, workshops and delicious food served up by the Studierendenwerk on the Poppelsdorf Campus © Volker Lannert



Right and bottom: Large-scale clothes swap in the CAMPO-Mensa in Poppelsdorf © Ronny Bittner







RhineCleanUp 2024 © Barbara Frommann









Cookery workshop © Volker Lannert

#### **Sustainability Day**

The Sustainability Day, which has been organized by Team N at the University of Bonn every year since 2022, has grown to become an integral part of the University's efforts to bring about a sustainable transformation. And the sheer variety in the University's contribution to sustainability became clear once again in 2024: less waste in trauma surgery, a wider range of vegetarian and vegan food in the canteens and innovative research into resource-efficient products are just a few examples. Over 20 stalls on the Poppelsdorf Campus offered visitors a wealth of information and interactive hands-on activities that demonstrated how sustainability is not only essential but also exciting and inspirational.

#### **Green Screen**

Green Screen is a film series organized by the University of Bonn's Team N, the Bonner Kinemathek and the Kulturzentrum Brotfabrik Bonn. Screenings exploring different aspects of sustainability are arranged at the cinema in the Brotfabrik cultural center six times a year and are followed by a discussion with researchers of the topics covered.



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As well as being prerequisites to sustainable development, participation and cooperation are also vital elements of sustainability's social dimension.

The University of Bonn is thus proud of the many ways in which its students and staff give their time voluntarily to make an active contribution to its sustainable development. With their wide-ranging viewpoints, ideas and projects, they are playing their part in shaping the future and are encouraging change. For instance, they are helping to secure the University's status as a Fairtrade University, advising BIPoCs (Black, Indigenous and People of Color), offering support in welfare emergencies, tackling issues such as human rights and climate change head-on, organizing the Public Climate School, adding value to the BOOST working group and campaigning for climate action within their departments, institutes and divisions.

These volunteers are breathing life into the concept of sustainability and doing much to ensure that sustainability is integrated and strengthened on a permanent basis at the University. They are fostering a sustainability culture and helping to embed sustainable development within society.

The next section of the Sustainability Reader introduces a number of student-led sustainability initiatives and institutions and provides a brief overview of their activities.

## Initiatives in individual departments, institutes and divisions

## Sustainability at the Bonn University and State Library (USL)

Sustainability is a top priority for the USL as well. Library staff are working hard to drive forward specific projects designed to make its activities more sustainable and do its bit for climate action. The most visible sign of this commitment came last year with the redesign of the green space between the Main Library and Adenauerallee. The lawn, which had previously had something of a uniform look, was supplemented with the addition of an ecologically intricate array of plants modeled on the original parkland dating from 1960. As well as becoming more visually diverse, the lawn – which previously had to be mowed frequently and give lots of water - has been repurposed as natural calcareous grassland

that now shines in a natural blaze of color. The plants are attracting insects and thus boosting biodiversity in the city. The USL has largely finished installing an internal trash separation system for both public spaces and staff rooms, while more bike racks have been provided on the side of the building facing the Beethovengymnasium. Internal recommendations on using resources sustainably have been drawn up for staff. The USL is hoping for backing from Central Administration in those areas in which this is required, i.e. where the library is unable to make headway on its own (such as installing solar panels on the roof and choosing sustainable approved suppliers). USL staff are very keen to do more networking on the topic in order to learn from colleagues and be able to leverage synergy effects.

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## Sustainability Community of Practice (CoP) in the International Office

The CoP grew out of the International Office's Sustainability working group, which was active between 2019 and 2024, and aims to raise awareness of sustainability as part of its international cooperation work.

The contact person is Annette Poetsch, Bilingual Coordinator and Joint Head of the Central Translation Service, whose involvement in the former working group and the current CoP dates back to 2019.

We want to update our office's "Guidelines for Sustainability in International Cooperation," introduce networking within the University, make environmental awareness an integral part of the Welcome Center with events and talks in the International Guesthouse, engage in dialogue on the subject with international partner universities and undertake a number of small projects in our office (e.g. a water butt and adding flowerbeds/plants in front of the office's buildings).

We would like the University to introduce rules on international travel that are binding on everyone. Simply hoping that people will choose to take the train rather than the plane when traveling within Germany is not enough. We would also like to see vegetarian and vegan food being pushed more at University events and specifications agreed in this regard in order to avoid having to have individual discussions and to set a good example as a University of Excellence.

#### Sustainability working group in the Department of Geography at the University of Bonn

Members of the department from all status groups have been involved in the Sustainability at the Department of Geography working group since early 2020. The group has set itself the following goals:

- 1. Taking action to improve sustainability in the Department of Geography in various areas, including events, procurement, energy, mobility, teaching and research, the "green library," and our digital carbon footprint
- **2.** Linking to other sustainability initiatives at the University of Bonn and with University management (horizontal and vertical links)

**3.** Setting a good example both within the University of Bonn and to the general public

The working group has already achieved a number of objectives. For instance, several sets of guidelines have been drawn up for matters such as making business trips and events sustainable, while a dedicated "Sustainability" section has been added to the departmental intranet. With promoting the use of bikes a key priority, a shower has been installed for cyclists and a bike shed complete with e-bike charging point has been built for staff. New bike racks are planned for students. Current activities include running sustainable field trips, managing large-scale events sustainably and making the department's technical infrastructure more sustainable.

## Sustainability working group in the Faculty of Arts

The Faculty of Arts's Sustainability working group was formed in 2024. Open to faculty staff and students, it is currently being developed and is helping to implement the Sustainability Strategy at faculty level.

## **AStA** departments

#### **Queer Department**



We in the Queer Department of the General Students' Committee (AStA) represent the queer students at the University of Bonn, i.e. everyone who is marginalized on account of their sexual, romantic and/or gender identity and/or who identifies as being outside the boundaries of hetero-, cis-, allo- or amatonormativity. These include gay, lesbian, bi- and pansexual/ romantic, asexual and aromantic people, trans\* people, non-binary and gender-queer people, inter\* people and everyone else whose label (or preference not to use one) is not listed here as well as anyone who is currently questioning their identity. There are two main thrusts to our work: We provide civic education on issues of sexual, romantic and gender diversity from as intersectional a perspective as possible while also engaging in community-building with a range of social events. Specifically, our semester program usually features talks, discussion evenings ("themed evenings"), readings and workshops to which all students (queer or not) are warmly invited.

You can find everything else you need to know on our website. We can also be contacted via email (**info@queer-bonn.de**) and on Instagram (@queerbonn).

#### **Department of Ecology**

We in the AStA's Department of Ecology are committed to playing our part in the sustainable transformation of the University and the Studierendenwerk and to providing activities and services related to sustainability, consumption and environmental protection for students and anyone else who might be interested. This sees us engage in regular dialogue with other leading sustainability figures and contribute to the relevant sustainability bodies at University and Studierendenwerk level. However, we also arrange talks and workshops on environmental topics. For instance, you will find us staffing information desks or themed tables at events such as clothes swaps and the Sustainability Day, organizing vegan cookery and baking classes or offering students veg boxes in partnership with the "Momo" organic shop.

Our department currently has four members, who will be delighted to welcome anyone interested in helping out.

We meet every two weeks in our office in the AStA's container building or on Zoom. If you share our interest in environmental issues, have some ideas for events or would simply like to get to know us, why not pop by one day or get in touch with us? If you have any questions, simply email us at **oeko@asta.uni-bonn.de** or visit our Instagram page (@oekoreferat\_asta\_bonn) and our **AStA web page** for the latest news and event updates.



#### **International Students Department**

The AStA's International Students Department has made it its mission to provide international students with information and advice on various aspects of student life on a voluntary basis. We hold office hours twice a week, where we attempt to answer questions on things like language courses, admission to the University, the Immigration Office (Ausländeramt), residence matters, finding accommodation and a job, financial emergencies and mental health issues. We also run a range of events, which are publicized on our social media. The Sprachcafé language-learning café is held every Monday, to which all language lovers are warmly invited. By maintaining extensive links to other institutions, associations and organizations, we endeavor to keep the information we provide up to date at all times. Our team, which is made up of our head of department, deputy head of department and five other comrades-inarms, is united by a shared sense of openness and mutual support. New members are most welcome, although you will need to be a student at the University of Bonn.



We would also be delighted to see you at one of our events!

You can get in touch with us by email **international@asta-uni-bonn.de** or via our Instagram page (@bonninternationalstudents).



© International Students
Department

#### **Department of Social Welfare**

Students of different subjects come together in the Department of Social Welfare to offer advice on a range of topics. We see ourselves as advocating for the interests of students.

Welfare advice covers issues such as funding your studies and finding accommodation, while we can also certify copies of documents relating to your studies for you free of charge.

Psychosocial counseling is your first port of call in the event of mental health problems or social difficulties.

We also offer dedicated advice to students with children, which covers everything to do with juggling studies with bringing up a child.



Welfare advice soziales@asta.uni-bonn.de

Psychological counseling psb@asta.uni-bonn.de

Studying with children smk@asta.uni-bonn.de

Head of department sozial.ref@asta.uni-bonn.de

### **Student initiatives**

#### **Students For Future**



Students For Future Bonn is a working group in the Bonn chapter of Fridays For Future and a university group at the University of Bonn. Our aim is to

create a climate-neutral university that upholds the principles of climate justice. We exert influence on the University by proposing strategies and making demands. Once a semester, we organize the Public Climate School, a month given over to climate education featuring a range of events. We are calling for much more climate education in all degree programs plus, for example, more research into sustainability issues. Our main focus is on projects associated with the sustainable university, although we also pursue initiatives not necessarily linked to the University itself.

Everyone is welcome to join in with our activities. Why not come along to our weekly group meeting on Tuesday around 7 pm? The best thing to do is contact us via Instagram (@studentsforfuture\_bonn)

or email us at **students@fridaysforfuturebonn.de** so that we can tell you exactly where and when the next meeting will be.

#### **Amnesty International**

Amnesty International has been among the world's largest human rights organizations ever since it was founded in 1961. Its primary mission lies in uncovering and tackling human rights violations, a task that we support in various ways in our capacity as a university group. Whether you prefer to pick movies for the Human Rights Cinema, collect signatures for petitions or appeals on the city streets or organize a charity concert or pub quiz, everyone is bound to find their own way to contribute in one of





Group picture Amnesty International © Amnesty International Campus group Bonn Sustainable Engagement 33

our working groups. Although every single member of the group would be able to tell you loads about what we do, the best people for you to get in touch with are our two group speakers, who we recommend contacting by email.

You can find us on Instagram (@amnesty\_bonn), Facebook (@Amnesty International Bonn) and our **website**.

Alternatively, you are welcome to email us at **info@amnesty-bonn.de** or simply come along to our next meeting. We meet every other Wednesday at 8 pm in the Amnesty office at Heerstraße 30. Whether we see you at one of our meetings or our next event, we are looking forward to getting to know you.

#### NARU

We in the NABU group at the University of Bonn are committed to further the cause of nature conservation and species protection in the region.

Our group meets monthly to plan new projects and share ideas. We come together to actively promote nature conservation, build bug hotels, go on trips, organize clean-up campaigns and much more.

One of our annual highlights is our house martin count in the summer, when we record the numbers of these fascinating birds. We also conduct weekly butterfly monitoring in the Botanic Garden from April to September to keep an eye on the diversity and condition of these insects. We are also monitoring dragonflies for the first time this year.

If you are interested in nature and the environment and fancy getting active, you are more than welcome to come along to our meetings and activities. Whether you are a beginner or a seasoned expert, you are bound to be in the company of like-minded individuals who you can chat to and help campaign for nature conservation.

You can contact us by email (**hochschul-gruppe@nabu-bonn.de**) or via our Instagram page (@nabu\_hsg\_bonn).





Group picture excursion to the Eifel region © NABU Campus group Bonn

#### Fair Trade university group

We are students of various subjects who are united by a shared commitment to fair and sustainable trade at the University of Bonn. Besides exchanging ideas and opinions, we plan events such as a fairtrade goal wall challenge and movie nights, which are designed to raise awareness of fair and equitable working conditions in supply chains.

We also engage in close dialogue with all the relevant people at the University of Bonn so that even more attention gets paid to fair-trade criteria in terms of procurement and the range of products on offer. Alongside our links within the University, we maintain contact with other Fairtrade Universities across Germany as well as with Fairtrade Germany and key local figures in the city of Bonn. Our Instagram page provides updates on current campaigns and events related to fair trade at the University.

We would love to hear from anyone who is interested in fair trade and keen to get involved. You are welcome to help out with anything that the university group does (events, public relations work, etc.).

The easiest way to get in touch with us is via Instagram (@fairtrade\_unibonn), email (fairtrade@uni-bonn.de) or our WhatsApp group. Do your bit and make the University of Bonn a fairer and more sustainable place!



#### Greenpeace

We are the university group of Greenpeace Bonn and focus on making sustainability part of our day-to-day lives here at the University. As well as raising students' awareness of a sustainable lifestyle, environment, climate and species protection, we also want to make University processes themselves more sustainable. Our events and activities are extremely varied, ranging from a pub quiz and (public) debates through to traditional info booths.

Fancy joining our group? We meet together with the local Bonn chapter of Greenpeace on the second and fourth Monday in the month at 7 pm in the Ökozentrum (Friesdorfer Str. 6, 53173 Bonn) in the Bad-Godesberg area of the city. We are always happy to welcome new support and additional ideas,



so please do pop by! If you have any questions, you can always reach us via our Instagram page (@hsg\_ greenpeace\_bonn) or email (schulgruppe@greenpeace-bonn.de).

#### Sea-Eye

Formed in 2015, Sea-Eye is a civil sea rescue organization that operates in the Mediterranean. We in the local Bonn group undertake various activities to keep the issue of sea rescue at the forefront of the public conscience, share information about Sea-Eye and the situation facing refugees and collect donations. We hold vigils, organize events such as film screenings and set up info booths at concerts. Our meetings are held on Wednesday in the Oscar-Romero-Haus at Heerstraße 5. Why not drop in? We are always happy to meet people who want to do their bit to help save human lives in the Mediterranean. You are welcome to get in touch by email (gruppe.bonn@sea-eye.de) or via Instagram (@seaeyebonn).





The Bonn Sea-Eye group at the 2022 Green Juice Festival in Bonn © Bonn Sea-Eye group





Faced with global challenges and, linked to these, a transformation that is manifesting itself in various ways, the University of Bonn has set itself the mission of empowering young people to make societies fit for the future and handle nature and its resources responsibly. As a cross-cutting issue, therefore sustainability is an important part of teaching.

The big challenges of our time call for a new form of teaching and learning that takes account of all these requirements and enables students to consider and incorporate sustainability in all life circumstances. As the University of Bonn understands it, this requires a specialist knowledge of sustainability first and foremost, with the expectation that as many different dimensions and perspectives as possible are considered and included. How can young people become active players in the process of socio-ecological transformation?

To stop crisis awareness from triggering a sense of powerlessness, practical skills must also be taught so that students know how and where they can get involved. This understanding is actively embraced in many ways at the University of Bonn.



# Teaching and learning sustainably (and sustainability) – what does that mean?

All higher-education institutions have a duty, through research-oriented, subjectspecific, inter- and transdisciplinary teaching, to impart knowledge and skills that empower their students to make both practical and conceptual contributions to the sustainable development of their society. Based on the understanding of sustainability espoused by DG HochN, higher education for sustainable development within the scope of this reader means combining specialist expertise with action skills for participatory decisionmaking and problem-solving competences as well as with personal skills. The decisive factor here is to foster an ability to reflect when faced with complexity and uncertainty.

In many areas, the concept of education for sustainable development (ESD) is opening up new perspectives on content as well as

providing momentum for further developing the methodology used in teaching, which should manifest itself in various ways in order to meet the different requirements of individual learners. At the University of Bonn, basic, orientational and applied knowledge is combined in the spirit of education for sustainability (EfS) in order to promote the active participation, involvement and decision-making skills of the learners. It also makes them capable of thinking in a critically reflective, systemic and interconnected way and encompasses judgment skills, action skills and transformation skills. This requires teachers and multipliers to develop the necessary knowledge and competences relating to sustainability and EfS and the institution to provide the necessary resources.



# Sustainable teaching at the University of Bonn

Although data on sustainability in teaching is still not collected systematically at the University of Bonn, many teachers have taught courses with a sustainability element for a long time now. A special practical form of courses like these is introduced below and explained with the help of examples – specifically, a number of individual projects from the 2024 summer semester and 2024/25 winter semester. Service learning allows students to get actively involved in the teaching and learning process and acquire (action) skills alongside subject-specific knowledge.



#### **Service learning**

**Service learning** is a form of teaching and learning that combines academic learning with practical experience. It aims to take questions associated with some of the current challenges facing society and tackle them in a creative and responsible way. Courses with a service learning format offer both the framework and the academic environment for potential practical activities, the scope of which is defined in advance. The spectrum of practical activities ranges from assisting with a project-based social initiative and designing a completely new, self-contained project through to regular, active involvement with a cooperating body. Participants are given the opportunity to make their own independent contribution to overcoming a challenge currently facing society.

At the same time, they attend a course of university seminars, where they can learn and consolidate theoretical knowledge, practical methods and skills necessary to make their involvement or project contribution a success. Regardless of the precise format of the course, students are encouraged to reflect at regular intervals on their experiences of applying their own specialist

knowledge in practice and on the successes and challenges that this has brought them. Service learning also always involves the students and teachers working with partners from industry and thus gaining transdiscplinary insights into other fields and areas of expertise.

During the course, students are actively involved in planning, preparing and designing the project and carry out activities that have a direct impact on an area relevant to society.

Taking the knowledge they have acquired and applying it in practice gives the students direct experience of their own learning achievements and enables them to identify any potential gaps in their own specialist knowledge and then close these themselves. Linking teaching to social engagement is geared toward instilling an awareness of both societal and political problems and issues. Service learning expands a student's

specialist, methodological and social skills, helps guide them toward a career and can contribute to a lasting transformation of society at local level by supporting various actors with the implementation and improvement of sustainable activities. Students obtain ECTS credits for attending the service learning courses. The Service Learning Coordination Office can provide central support with planning, organizing and running service learning courses if required. The office was set up in summer 2020 with help from the Vice Rectorate for Teaching and Learning and has been part of the Bonn Center for Higher Education since summer 2023.



# Case study: Changing Bonn: Shaping transformation and sustainability at local level

#### Idea and process

The **Bonn wandeln ("Changing Bonn") seminar** is supporting the City of Bonn's target of becoming climate-neutral by 2035 by assembling key actors from civil society, city administration, science and academia to discuss issues pertaining to the local transformation. The aim is to bring together leading figures from civil society, city administration and, in particular, various academic and scientific disciplines to focus on one or two transformation topics of local relevance. The people involved are ultimately expected to reach tangible agreements for the next steps if at all possible but, in particular, to identify effective forms of future cooperation as well. The seminar ends with a day-long event that students are to plan and deliver as a platform open to the general public. Participants will determine the content, schedule and advertising for this event at a

total of eight compulsory in-person sessions. In the process, they will explore the transformation topics linked to the seminar objectives, identify important target groups within the city of Bonn and establish a network of contacts. As part of this planning and acquisition work, students will also grapple with the conditions required for social transformation to succeed, analyze different conceptual frameworks for transformative action with practical relevance and reflect on the skills required in these contexts. The seminar forms the culmination of the "StadtKlimaWandeln" ("Transforming the Urban Climate") project, as part of which several service learning seminars have already been held on designing green spaces in a participatory process to make Bonn a more climate-resilient city.



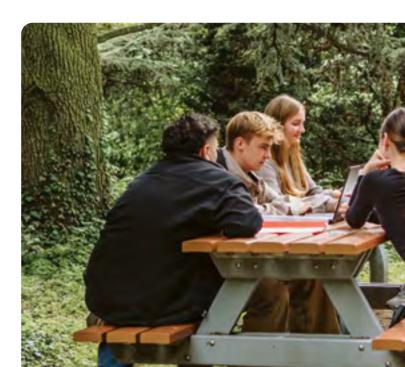
Students working in groups
© University of Bonn/Bernadette Yehdou

# Case study: The Future Challenge – working together for more sustainability in daily life

#### Idea and process

The **Future Challenge** is a project devised by students at the University of Bonn as part of the Learning For Future teaching/ learning project in partnership with the Wissenschaftsladen Bonn. The resulting seminar was held for the first time in the 2024 summer semester and aims to raise awareness of climate change and motivate participants to learn sustainable practices and skills and make them an integral part of their everyday lives. This involves taking challenges that the students devised themselves and that are geared toward incorporating conscious offsetting measures into their daily routine. In terms of their content, the challenges are based on the seminar's three themed modules -

motivation, climate communication and empowerment – and are designed to help participants to acquire new skills and take action. For example, this could be launching an initiative campaigning for more sustainability in one's own city, engaging in conversation with climate-critical acquaintances or injecting more sustainability into one's daily routine. Participants are supported in their efforts to complete the challenges and given ample space to exchange ideas



and support one another. In the seminar, the students are expected to tackle sustainability challenges that relate to their daily routine and to develop joint solutions and skills.

The seminar is intended to provide students with an open space for reflection in which they can discuss problems, come up with solutions and support one another. In addition, the students' intrinsic motivation for greater sustainability is expected

to encourage them and lead them to reflect on the issue and translate this into action/activities (e.g. a commitment to sustainability and training sustainability multipliers). Students are to be encouraged to devise a substantial climate challenge and attempt it together as well as applying methods and approaches in the seminar that focus on peer-to-peer learning.



Students learning outdoors
© University of Bonn/Bernadette Yehdou

#### Example of a project seminar: Urban Food Transition

#### Idea and process

The issue of food sustainability and the related question of alternatives to conventional food supply in towns and cities is becoming increasingly important. In 2015, more than 160 towns and cities worldwide signed the Milan Urban Food Policy Pact, committing themselves to sustainability and a transformation in eating habits. Various actors and alternative food networks (AFNs) are campaigning for increasingly sustainable, fair and regional food production and consumption, while issues relating to critical agrifood geographies are receiving increasing attention in the academic debate. The aim of the project seminar is to analyze the importance of a socio-ecological transformation of the food system as part of sustainable urban development using the example of Bonn (a "Bio City" since 2019) and to discuss the establishment of a food

council as a possible approach to an **urban food transition**. As a grouping of different local actors from business, civil society, administration, politics and other areas of public life, food councils can create an opportunity for co-determination on food in urban areas and thus more food sovereignty.

Small groups of three to four people worked independently on projects relating to the urban food transition and food sovereignty, which allowed the opportunities and challenges facing food councils, the specific situation in Bonn and examples of best practice to be analyzed in more detail. The planning and delivery of these independent research projects included formulating a specific



University of Bonn students looking around the Tannenbusch dunes as part of the StadtKlimaWandeln service learning project

© University of Bonn/Volker Lannert

Students on Hofgartenwiese lawn in front of the University Main Building © University of Bonn/Gregor Hübl



question, selecting a suitable conceptual framework and research design and then going on to collect the necessary data. Two whole-day excursions allowed the students to gain practical insights, both into the work done by the food council in Cologne and the projects based there and into the activities of people from Bonn connected with urban

agriculture, feeding the community and other charitable initiatives. A closing event was held, where students presented their results in the form of a poster exhibition. They also invited the audience to join in a panel discussion about how Bonn's food transition could be actively shaped. The seminar was run in partnership with Bio-Stadt Bonn and "Wertvoll" ("Valuable"; formerly "NEiS," short for project "Nachhaltige Ernährung im Studienalltag," or "Sustainable everyday eating for students"), an initiative of the Verbraucherzentrale NRW consumer association. The project seminar was held in the 2024 summer semester, and work on a follow-up format is currently under way.

Organized and hosted by Dr. Juliane Dame from the Department of Geography

Derek Kwella – Project Coordinator at the Bonn Center for Higher Education

#### Looking back: "Aspects of the Climate Crisis" lecture series

The University of Bonn is keen to offer all its students, on any degree program, the opportunity to learn about the climate crisis and engage with a wide range of sustainability-related issues. To this end, the lecture series "Aspects of the Climate Crisis" was arranged for the winter semester as a continuation of another successful lecture series, "Aspects of Global Heating."

Students were presented with a new dimension of the climate crisis to grapple with every Tuesday. Various facets were addressed, from philosophical arguments in favor of civil disobedience and post-colonial and feminist perspectives through to the "Economy for the Common Good" and the role of the EU. As well as teaching specialist knowledge, the lecture series also aims to provide space for constructive discussion, bringing students, activists and

researchers together for this purpose. Students who attended the event earned six ECTS credits in the Faculty of Arts' Interdisciplinary Practice Area. The lectures were streamed live on YouTube and can be watched on the "Aspekte der Erderwärmung" channel.

Further impetus was provided in the 2024 summer semester by the interdisciplinary seminar entitled "Thought Journey: what kind of future do we want to live in?"

Prospects for the future from various areas of life were debated every week, with a focus on various social and political topics. The seminar ended up covering everything from museums and post-growth theories through to surveillance technologies and climate resilience in urban development and was rounded off with a field trip.

#### Looking ahead: sustainability certificate

The lecture series entitled "Sustainability – Challenges and Opportunities of a Sustainable Transformation" was run for the first time in the 2023/24 winter semester and is now set to be held every summer semester from 2025 onward. It is intended to form part of the planned sustainability certificate for University of Bonn students of all subjects, which will require them to attend inter- and transdisciplinary lectures, seminars and tutorials relating to sustainability. The certificate will be designed with involvement from all status groups to make sure that it aligns with students' interests and can be incorporated into teaching.





Sustainability is a research question that is relevant to the whole of society. Global challenges such as man-made climate change, biodiversity loss and social inequality are presenting researchers with complex questions. We need to cultivate a sound knowledge base for causes, potential solutions and scope for constructive action in our present-day reality while acknowledging our responsibility toward future generations.

#### The understanding of "sustainability" used in this chapter

In line with DG HochN, we see sustainability as an interdisciplinary principle relevant to the whole of society. To tackle the complex and multi-causal nature of societal challenges, sustainability research encourages collaboration between specialist disciplines (interdisciplinary) and between higher-education institutions and other sections of society (transdisciplinary). In terms of content, therefore, the primary focus is on research findings that straddle subject boundaries as well as results specific to individual disciplines.

The University of Bonn is home to researchers at various stages of their careers who are studying all manner of different aspects of sustainability and sustainable development in an inter- and transdisciplinary way. These include: renewable raw materials; climate change and policy; agricultural systems and food; justice, dependencies and decolonization; human-environment systems and environmental conflicts; societal transformation and futures; and the links between sustainability and technology.

# Examples of sustainability-related research projects

#### LANUSYNCON

### Land Use Synergies and Conflict within the framework of the 2030 Agenda

- Project term: 2020 to 2025
- Project manager:
   Assistant Professor
   Lisa Biber-Freudenberger, Center for
   Development Research (ZEF)

How can we make most efficient use of the land available to us and thus facilitate human development while reducing the negative impact on the environment? This is probably one of the most important questions that we will need to answer if we are to secure the survival of the human race.



This is the question being tackled by the team of researchers involved in the LANUSYNCON project, who are studying how efficient land use can unlock development while reducing negative environmental impacts. To come up with an answer, LANUSYNCON is harnessing the links between different perspectives, actors and research fields, because insufficient coordination between the land use decisions made by different actors often leads to conflicts of ownership, access and use.

For their work, the researchers are studying the consequences for different Sustainable Development Goals (SDGs) of various decision-making options in a land use context and their potential for avoiding land use conflicts between different dimensions of sustainability. Existing and newly acquired data is being combined with the knowledge possessed by decision-makers and other stakeholders and translated into model-based policy decisions and land use scenarios with the aid of case studies from Kenya and Tanzania, among other things.

Although political decision-making processes are often supported by science-policy interfaces (SPIs), how capable these are of incorporating a variety of perspectives and objectives into their work is unclear. The project is therefore investigating the capacity of SPIs to take synergy effects and conflicts into account in order to help make their work more effective and more sustainable.

LANUSYNCON's work is designed to contribute to sustainable land use by identifying relevant options that avoid land-use conflicts and by improving how synergy effects and conflicts are factored into political decisions.

The LANUSYNCON research project is based at the Center for Development Research (ZEF) at the University of Bonn. Established in 1995, the ZEF focuses on scientifically sound solutions that promote sustainable development and planetary health. Its research departments and groups carry out inter- and transdisciplinary research in, for and with countries of the Global South, while its doctoral program trains doctoral students from all over the world.

Read more online.

### H<sub>2</sub>tofielddrive

### A hydrogen fuel cell tractor on an H<sub>2</sub> pilot farm

Project term: 2024 to 2027

Professor Ralf Pude,
 Klein-Altendorf Sustainability Campus

The agriculture industry is considered to be the fifth largest producer of carbon emissions in Germany, accounting for some 8 percent of total emissions in 2021. The target for 2030 is for agriculture to emit no more than around 60 million metric tons of  $\mathrm{CO_2}$  per year. One way to cut agricultural emissions is to reduce the amount of exhaust gases produced by agricultural machinery. Since these currently equate to roughly 21.2 million metric tons of  $\mathrm{CO_2}$  across Germany, there is thus significant potential for savings in this regard.

Harnessing fuel cell technology to produce green hydrogen is the only carbon-neutral form of power that could serve as a longterm replacement across the board for the diesel engine, which is still commonplace in the agriculture industry. The project aims to trial the use of green hydrogen in an integrated, scientific "living laboratory" that reflects real-world conditions. Specifically, this is an H2 pilot farm situated on the University of Bonn's Sustainability Campus in Klein-Altendorf. To this end, a hydrogenpowered fuel cell tractor model and the synergy effects with the requisite tank infrastructure are being subjected to a range of tests on both an experimental and a real-world scale that look at various agricultural requirements in this living



laboratory. As there are still gaps in the supply of green hydrogen across Germany, particularly in rural areas, the infrastructure is also being tested using a self-sufficient mobile tanker ("plug and play") so that statements can be made about its use in day-to-day agriculture.

The project is setting up a direct scientific and practical comparison between the innovative EOX 175 hydrogen-powered tractor and the Fendt 720 Vario (diesel). The Klein-Altendorf Sustainability Campus will be providing the new Fendt required for the project from its own fleet as well as the existing test site infrastructure on the campus that the project will need.

The H2tofielddrive research project is based at the University of Bonn's Sustainability Campus in Klein Altendorf. Work to upgrade the Klein-Altendorf site to a full-fledged campus began in 2010.

In his capacity as director of the campus and holder of the corresponding chair, Professor Pude has consistently used it as a test bed for putting much of his research work into practice ever since he took up his posts. This has brought the campus multiple awards, being named "Ort des Fortschritts NRW" in 2013 and "KlimaExpo NRW-Standort" in 2016. Innovative concepts for infrastructure and working processes continue to be studied and applied, meaning that the campus is gradually growing more sustainable. Many project findings are being put into practice at bio innovation park Rheinland e.V., among other places, giving them a resonance that extends well into the surrounding region.

Read more online.



Hydrogen-powered tractor © Michael Knubbertz



### Alternative Sustainabilities

### Between local contexts and global dimensions

- Project term: 2022 to 2024
- Professor Kristina Großmann and Dr. Sandra Gilgan, University of Bonn

How do local and global sustainability ideas and actions relate to one another, especially if the local ideas do not fall into the recognized categories of the economic, ecological and social dimensions of sustainability? How can this be supported by interdisciplinary approaches in the social sciences?

This interdisciplinary working group started from the working hypothesis that the current global "mega-debate" surrounding sustainability, which includes the SDGs, is largely characterized by "Western" and "Northern" viewpoints, narratives, ideas and standards. Viewpoints from the Global South, by contrast, are rarely if ever taken into account. As a global concern, however, sustainability requires the consideration of a broader

understanding of what modern societies fundamentally are, what they are conceived to be and how the relationships between human beings and nature are understood and realized in societies across the world and reflected on in people's worldviews and in the political sphere. Scientific findings that can underpin political actions and decisions must acknowledge and take due account of the epistemic and ontological differences and similarities between Western and local or indigenous knowledge.

The working group is focusing on the tensions between various concepts of and approaches to "sustainability" and how these are applied in practice. For example, how is the concept of "buen vivir" being discussed in various Latin American countries? What is the situation regarding "ecological civilization" in China? How do these approaches influence the realms of politics and science?

And what is their relationship with the global 2030 Agenda for Sustainable Development? How is this "plurality of sustainabilities" to be addressed?

The working group was set up at the German Committee Future Earth (DKN), which has been tasked by the German Research Foundation (DFG) with furthering the development of the scientific sustainability agenda by identifying and exploring strategically important themes in sustainability research and integrating them into the international research environment. The DKN forms working groups in order to advance sustainability research in Germany and support the researchers studying sustainability issues and sustainable development.

Read more online.



#### **SOZIAHR**

#### Social, economic and administrative challenges of climate resilience

- 2024-2025
- Assistant Professor Jacqueline Lorenzen,
   Assistant Professor Hanna Schwank,
   Assistant Professor Svenja Hippel,
   Assistant Professor Julia Mink,
   Susanne Bell MA, University of Bonn

The catastrophic flooding in the Ahrtal valley presented a once-in-a-lifetime opportunity to advance basic research through observations of an extreme event while also supporting the development of a crisis-hit region with academic and scientific expertise.

An interdisciplinary team of researchers working in the fields of economics, law, geography, sociology and political sciences is developing some joint research activities on these topics, combining analytical basic research with the production of descriptive data that is directly relevant to the situation on the ground.

The key questions that the team is addressing using these methods include:

- What effect did the Ahrtal floods have on income and wealth inequality?
- How are legal institutions tackling the challenges posed by the rebuilding work, and what impact is this having on their public support?
- What social conflicts erupted in the wake of the flooding, and how are they affecting social cohesion?
- How are people's experiences of the flood influencing their political attitudes and voting behavior?

The project has been officially funded by the Individuals, Institutions and Societies Transdisciplinary Research Area at the University of Bonn since June 2024.

#### Read more online.



Ahr floodplains, September 8, 2021 © Susanne Bell

#### The impact of research on sustainability

Bringing about the sustainability transformation in society is a core aim that researchers are constantly working toward. The results of this research have the potential to influence social change via various channels. They can be shared with the general public via media appearances, newspaper articles, presentations and various science communication measures and can thus influence public debate, the demands made of decision-makers and, in some cases, even (personal and political) decisions themselves. Collaborating with partners from industry and transferring ideas and innovations into various sectors, such as the economy, can also be beneficial. In transdisciplinary projects, these industry partners are involved right from the start.

Policy is another important area for knowledge transfer. Research findings can be used to lend legitimacy to political decisions and inform planned policy measures. Besides participation in advisory bodies and committees, policy advice also includes supporting the people making policy decisions by providing them with publications, statements and presentations on specific topics. Through their membership of relevant advisory boards, researchers from the University of Bonn are advising the German federal government on issues including climate action, global environmental changes, agricultural policy, food and biodiversity in particular.



Writing retreat in Altenahr in September 2024 © Julia Noppeney

#### Scientific partnerships for sustainability

# A holistic understanding of science and close collaboration are key aspects for sustainability.

As a "UN city," Bonn is home to a great many experts working in the field of sustainability and sustainable development – in associations, international organizations, think tanks, non-university research establishments and, of course, the local higher-education institutions. All these experts contribute their individual perspective and knowledge to produce a well-rounded scientific view of "sustainability" and a systemic approach to society's development along these lines.

Several local and regional Fraunhofer and Max Planck Institutes and other non-university research organizations forming part of the four major research associations receiving national funding combine to produce an extraordinarily innovative environment for sustainability research, and the University is playing a leading role in supporting this network as part of the Bonn Research Alliance (BORA). The University is also an active member of local and regional sustainability networks such as Humboldt<sup>n</sup> and the Bonn Alliance for Sustainability Research.

Editor and contact for BORA: Dr. Sandra Gilgan















Running the University of Bonn, with its many teaching, research and administrative units, means using resources and generating emissions. Nevertheless, the University has set itself the objective of gradually reducing its resource consumption and greenhouse gas emissions in order to become climate-neutral in the future and thus make a lasting contribution to environmental protection and climate action.

### A climate-neutral state administration

In the Climate Action Act of the state of North Rhine-Westphalia (Klimaschutzgesetz NRW, or KSG NRW), the NRW state government has committed to achieving climate neutrality by 2030 and is thus now working closely with the state's highereducation institutions governed by public law. Together with 13 other universities and 16 universities of applied sciences in North

Rhine-Westphalia, the University of Bonn has signed an agreement to take part in reporting for the "Klimaneutrale Landesverwaltung" ("Climate-Neutral State Administration") initiative. This is geared toward introducing uniform standards for calculating emission footprints and thus establishing a transparent basis for further climate action.

#### **Energy Strategy**

Against the backdrop of rising energy costs and geopolitical uncertainties, sparked in particular by the war in Ukraine, the highereducation institutions in NRW came together to set a target of cutting their energy consumption by 20 percent by November 2023. To this end, the University of Bonn formulated a dedicated Energy Strategy in order to meet this shared target and reduce its energy consumption significantly. In fact, the University has not only met but exceeded its target, achieving a reduction of 23 per cent in its 40 most energy-intensive buildings. These savings were an essential response to the energy crisis. Repeating these savings over the coming years will be difficult, however, due to changes in the law such as an increase to the minimum temperatures to be maintained inside buildings.

As well as consuming less energy, the University is also committed to using more renewable energy, e.g. with solar panels. Six pilot projects to install them on new and existing buildings are already under way. The University's Provost Holger Gottschalk has stressed the long-term importance of these measures to bring about a continuous reduction in its energy consumption.

	Savings target	<b>Total savings</b>
Heat	9.14 million kWh	13.3 million kWh
Electricity	7.31 million kWh	5.5 million kWh
Gas	403,000 m <sup>3</sup>	721,000 m <sup>3</sup>





Agrophotovoltaic system in the crop garden © Gregor Hübl

The new solar panels in Poppelsdorf © University of Bonn/Volker Lannert

## Green electricity and energy savings at the University

The University of Bonn significantly improved its energy use in 2023. In that year, it required around 46.6 GWh of electricity to run its teaching and research units and administrative buildings, much less than the 49.6 GWh consumed in 2022. The University switched to 100 per cent certified green electricity as early as November 2019.

#### **Heat supply**

The University continues to use mainly district heating from Stadtwerke Bonn's waste-to-energy (WtE) plant to heat its current stock of 359 properties. It required some 33.8 GWh of district heating in 2023, which is likewise a marked fall on the previous year. Besides district heating, 7.8 GWh of gas and about 90,000 liters of heating oil were also used to generate heat. One new feature this year has been the central procurement of wood pellets, which were purchased via the University.

These are used in the boilers on the Klein-Altendorf Campus, which have actually been in operation for some time now. A total of 13,660 kg of wood pellets was used in order to improve energy efficiency even further.

#### Waste management

The University of Bonn introduced an enhanced waste management concept in 2023 that focuses on avoiding and separating waste. All its members are brought on board through measures and information such as the Waste ABC, which provides a quick overview of the right way to dispose of different kinds of waste.



The waste separation system at the University of Bonn © Dennis Nasser

It also offers tips on obtaining standardized waste containers and a checklist for identifying superfluous garbage cans. The overarching aim is to reduce the volume of waste, especially general waste, so that more gets recycled. Having fewer garbage cans in offices, kitchens, libraries and laboratories is designed to ensure that reusable/recyclable materials are sorted into their constituent materials and that the containers themselves are used more efficiently. A specialist section is on hand to dispose of dangerous goods such as chemical, electrical and electronic waste in the correct manner.

#### Paper consumption

The University of Bonn reduced its paper consumption by 12.18 percent year on year in 2023. The percentage of recycled paper bearing Blue Angel certification rose from 37.7 percent in 2022 to 44.1 percent in 2023, thanks not least to increased digitalization in the Accounting and Travel Expenses teams. The University has also taken part in the "Papieratlas" ("Atlas of Paper") competition since 2023. Using recycled paper saved 600,000 liters of water and 140,000 kWh of energy last year.

#### Vehicle fleet

The University of Bonn actively promotes sustainable mobility and partners with three organizations: Nextbike, JobWärts and GoFlux. This allows students and staff to log into Nextbike, for instance, with their Uni-ID and get free use of a bike for 30 minutes a day, which encourages them to get around campus in an environmentally friendly way.

There is also a bike shed behind the lecture hall center on the Poppelsdorf Campus to give cyclists somewhere secure to store their own bikes. GoFlux supports sustainable mobility through its app, which helps commuters and drivers to carshare. Among other things, the University of Bonn is also gradually replacing its fleet with electric vehicles in order to cut its emissions significantly. The University's fleet currently comprises twenty-five all-electric and five gasoline-electric hybrid vehicles, which are already contributing to more eco-friendly mobility on campus.

Sustainability in operations 65

#### **Procurement**

The University of Bonn has been entitled to call itself a Fairtrade University since 2020. The award was secured thanks to the highly dedicated Fairtrade student initiative at the University, which supported the application process with a high level of commitment. Being certified as a Fairtrade University confirms the University of Bonn's active commitment to fair trading practices and use of fair-trade products in its day-to-day operations. This includes choosing fair-trade coffee, tea and other foods and promoting fair working conditions.

The University of Bonn was recertified by Fairtrade Germany in 2024 and can continue to call itself a "Fairtrade University" for a further two years. The recertification reaffirms the University's ongoing dedication to social and economic justice and underscores its efforts to inject more fairness into the global economy. It is planning to be recertified again when the time comes and is keen to strengthen its commitment to fair working conditions and sustainable procurement even further

Did you know there's a bike shed directly underneath the lecture hall center on the Poppelsdorf Campus? The entrance is between the canteen and the CP1 lecture hall center.

An energy saving of 20 per cent equates to 17 MWh. If you were to use this energy to power an electric vehicle, you'd get about 2,200 times round the Earth!

The amount of energy consumed in 2023 would be enough to bake 46.6 million cakes.

...while the amount of heat consumed in 2023 could heat around 1,500 single-familyhomes.





Sustainability means more than mitigating climate change. Besides promoting environmental sustainability, the University of Bonn also sets great store by its commitment to social justice and its elimination of existing barriers and inequalities in studying and day-to-day work.

There is a direct link between environmental and social sustainability. If our society is to undergo a major transformation, this will require a fair distribution of resources and opportunities, regardless of people's sexual orientation, background or how much their parents earn. These latter factors in particular continue to have a big hand in whether someone will be able to embark on a degree program and/or complete it successfully.

Universities act as drivers of sustainable development and are setting an example through their actions. All members of the University of Bonn must be involved in the process for making it a more sustainable place; all views and all manner of different experiences are welcome and useful.

To make the transformation process as diverse as the University itself is, support must be channeled to those individuals whose voices are not heard enough in the public debate.

At the level of the vice rectorates, the Vice Rectorate for Equal Opportunity and Diversity holds chief responsibility in this regard, while other entities such as the Office of Family Services and the Gender Equality Office also provide various support options in line with their main activities. Practical projects are particularly important when it comes to social justice since they actively support the people affected and help to minimize existing inequalities.

#### Equal opportunity and diversity at the University of Bonn – striving for more diversity on campus

Human diversity – reflected in a broad spectrum of potential, experience and lifestyles – presents a challenge to the University as a teaching and learning organization. In a bid to foster innovation and fitness for the future, the guiding principle of the diversity strategy is to tap into existing areas of potential and grow them further in a target-group-specific way with the involvement of all status groups.

The University is keen to make diversity visible, to recognize the diversity of its members and to value and support the individual potential of each and every one of them.

## Ways to improve equal opportunity and diversity

The aim is to establish diversity as a cross-cutting issue and to develop and put in place sustainable structures that are coordinated across the whole University. These tasks were assigned to the Vice Rectorate for Equal Opportunity and Diversity and the Equal Opportunity and Diversity Unit in May 2021. The team led by Vice Rector Professor Irmgard Förster injects strategic momentum in order to promote excellence through diversity and inclusion. To this end, the Vice Rectorate and Unit, the latter led by Anna Hollstegge, will initially be focusing on five priorities: gender equality, especially in management positions; making education easier to access, including for people from non-academic households; improving the compatibility of family, studies, research and career; protection from discrimination: and inclusion.



#### **Gender equality**

The Strengthening the Equal Opportunity Process (STEP) is geared toward providing targeted funding to female researchers at all stages of their careers and supporting the recruitment of women professors at the University of Bonn. To this end, various funding instruments are tailored flexibly to the needs of the individual researchers and help to support their career development and their networking efforts within Germany and further afield. Another example of a project designed to improve gender equality is the provision of free period products.

#### **Educational justice**

The MitSprache program is offered by the Department for Intercultural Communication and Multilingualism Research at the University of Bonn in partnership with the Caritas Association for the city of Bonn. The program focuses on the linguistic inclusion of young people with an international background who have recently arrived in Germany and who are interested in embarking on a degree program or vocational training.

Another measure designed to promote educational justice is Pathways to Research, a program targeted at early-career researchers who have come to Germany as migrants or refugees and who are currently still under-represented among the University's researchers.

#### Family-friendliness

The University of Bonn takes "family" to mean a life partnership held together by close personal ties, in which people take responsibility for one another. The various family models represented by staff and students have also become more and more nuanced in recent years. To enable needs to be gauged at regular intervals, the Vice Rector and the Office of Family Services set up the "Familie in der Wissenschaft" ("Family in Science") round table in March 2022. Researchers with care responsibilities now meet on a regular basis to chat, talk about barriers they encounter in their day-to-day work and come up with strategies for improving their situation. There are also plans to build a new childcare facility on the Poppelsdorf Campus.

#### **Anti-discrimination**

Tackling (structural) racism and discrimination at German universities is a challenge that the University of Bonn is also facing up to. Racism is an issue that should be considered from an intersectional (i.e. crossdimensional) perspective. Universities need to adopt a stance on racism that takes the institution as a whole into account.

One-to-one anti-racism counseling provided by an external psychological counselor and trainer for empowerment and anti-discrimination gives students the opportunity to talk about specific racist incidents or harassment caused by racist discrimination in a University context. It creates a space for people to reflect on their personal experiences and helps them to devise individual coping strategies and potential courses of action. Further measures are expected to follow.

#### Inclusion

As a cross-cutting issue, inclusion has an impact on many areas of University life. This means formulating an overarching strategy for implementing the inclusion process, rolling it out within the network and continuing to update it. There are also plans to support and steer the inclusion process from an intersectional perspective to inject fresh momentum, which will involve advising and supporting the various organizational units.

The issue of accessibility is to be accorded particular prominence in this context in terms of both structural barriers and providing information and advice that is as accessible as possible.



### Working together to boost diversity, underpinned by a strong network

Evolving and implementing the strategy for diversity, equal opportunity and inclusion relies on forming networks. The University thus follows the BRIDGES<sup>2</sup> guiding principle, which combines different knowledge bases, skills and the central and local measures based on them into a mutually reinforcing relationship.

The "Shaping Diversity" Audit in March 2020 laid the foundations for this development, which will now need to be consolidated over the next few years. The re-audit was held in fall 2024 and involved the University's network partners and representatives from its three status groups: teachers and academic staff, students, and technical and administrative staff.

The Equal Opportunity and Diversity Portal lists the many support, advice and participation opportunities that the University already offers. The contact form on the **portal page** lets members of the University communicate their requirements, ideas and constructive criticism.

#### Looking ahead

Providing targeted support to a larger number of talented individuals, making the student life cycle and working conditions as accessible as possible for everyone and incorporating a range of viewpoints and experiences into how the University's culture is shaped will require the injection of structural momentum that promotes excellence through diversity and inclusion.

The Vice Rectorate and Unit are hoping for broadbased support in order to come up with more project ideas and programs in a target-group-specific way and implement them on a sustainable basis.

### University of Bonn Office of Family Services

In its work, the Office of Family Services focuses primarily on issues relating to the SDGs of gender equality, good health and well-being, and reduced inequalities. It is tackling these challenges through project work, some of which is done together with the Gender Equality Office. Besides promoting equality in the distribution of roles, another priority is devising shared working-time models for staff and encouraging networking among students.

Specifically, the Office of Family Services provides advice on various topics, including funding one's studies, childcare, studying with children and caring for family members. Its projects and services range from workshops, networking events and newsletters through to loaning items and sourcing carers. More information on what the Office of Family Services currently offers can be found on its **web page**.

The Office of Family Services is also aiming to train care support workers, increase the number of childcare places available and make life easier for students with family responsibilities.









An institute under public law (AöR), the Studierendenwerk Bonn is a nonprofit organization established to serve the common good. It has a statutory mandate to improve the social and economic conditions facing students in higher education in the Bonn/Rhein-Sieg region. With around 360 staff, the Studierendenwerk provides services for 45,000 students, including canteens and cafeterias, affordable housing, childcare, funding for their degree program and general advice on studying.

As far as the Studierendenwerk is concerned, economic and socially responsible action are two sides of the same coin.

It was certified as a "Partner of Sustainable Bonn" as long ago as 2011, underlining its ongoing commitment to a more sustainable way of doing business.

A Sustainability Unit was established recently to give the issue prominence within the Studierendenwerk's management.

#### 1. The economic dimension

Working in a cost-optimized way is a matter of course for the Studierendenwerk, and potential savings that can be made in the interests of sustainability are routinely identified and implemented. Any profits are fully reinvested in the services provided, e.g. in refurbishing existing dormitories or building new ones.

#### 2. The environmental dimension

The Studierendenwerk strives to optimize resource consumption and to scrutinize supply chains for more sustainable storage and production conditions on an ongoing basis within the scope of purchasing partnerships.

#### 3. The social dimension

The Studierendenwerk Bonn is an institute under public law, meaning that it is a public enterprise designed to serve the common good.

The counseling and other services that it provides are geared toward permitting all students the same opportunities to embark on a degree program.

#### A fair employer

All staff benefit from the Collective Agreement for Public Service of the German States and a powerful staff representation body.

#### Fair-trade products

The Studierendenwerk has served 100 percent fair-trade coffee since as long ago as 2005, since when its product range has been expanded continuously to include tea, hot chocolate, chocolate and cold drinks.

#### Social responsibility

Professional counseling services are free of charge for students.

The Studierendenwerk supports students who find themselves in difficulty with offerings such as the Freitisch, which gives them free food in the canteens and cafés.

### Corporate carbon footprint calculated for 2022 and 2023

In July 2022, the 12 Studierendenwerke in North Rhine-Westphalia expressed their commitment to the state's climate policy goals for sustainable management. They have set themselves the ambitious target of becoming climate-neutral by 2030.

But what does that mean in specific terms? What levers need to be tweaked in order to meet the target? The first step is to get an overview: Where are we now? What can we exert influence on?

A carbon footprint had to be calculated for the whole of the Studierendenwerk. In a process that took weeks of detailed work, all the Studierendenwerk's bills for electricity, heating and water as well as all boughtin goods and services were entered into a database with the aid of external support in order to produce a sound  $\mathrm{CO}_2$  report. After all, a report will only be meaningful if it is underpinned by high-quality data, something that has largely been achieved in this case.

#### Emissions in carbon-dioxide equivalents:

#### 2022 | 9,655 t CO<sub>2</sub>e (absolute) 2023 | 26,190 t CO<sub>2</sub>e (absolute)

Breakdown of emissions	2022	2023
Total Scope 1 emissions	244.79 t CO <sub>2</sub> e   2.54%	375,69 t CO <sub>2</sub> e   1,43 %
Total Scope 2 emissions (market-based)	309.82 t CO <sub>z</sub> e   3.21%	375.69 t CO <sub>2</sub> e   1.43%
Total Scope 3 emissions	9,100.64 t CO <sub>2</sub> e   94.25%	624.08 t CO <sub>2</sub> e   2.38%

The sources of emissions to include in the footprint were chosen based on the **Corporate Accounting and Reporting Standard**, which is part of the **Greenhouse Gas Protocol**:

**Scope 1** comprises all direct greenhouse gas emissions, such as primary sources of energy consumed directly within a company (natural gas, heating oil, gasoline, diesel, etc.).

**Scope 2** comprises the indirect greenhouse gas emissions produced in order to generate the energy purchased by the company, such as secondary sources of

energy consumed by the company (electricity, district heating, steam, cooling energy, etc.).

Scope 3 comprises other indirect greenhouse gas emissions that are closely linked to the company's activities and that are generated along its up- and downstream supply chains. Scope 3 emissions will always also be another emitter's Scope 1 and 2 emissions.

The various sources of emissions were categorized using the Greenhouse Gas Protocol's operational control principle.

Initial savings on the Scope 1 and 2 emissions that the Studierendenwerk can influence directly were achieved by reducing the volume of waste produced and the amount of commuting done by its staff.

The sharp rise in Scope 3 emissions in 2023 was due to the building work being done in and around Nassestraße.

#### Selected projects 2022–2024

### Food and non-food procurement guidelines updated | September 2023

The Executive Board of the Studierendenwerk Bonn amended its procurement regulations. In particular, this involved updating the guidelines for purchasing food and nonfood products. The aim is to mainly buy food and other products in accordance with sustainable criteria in order, for example, to increase the proportion of organic food served in the canteens or, in the medium term, to buy meat from animals reared in better conditions.

This means higher purchase prices, which results in conflicting objectives.

### Solar panels on the CAMPO-Mensa | July 2023

As part of a strategic shift toward a more sustainable way of working, suitable roof spaces on the Studierendenwerk Bonn's many properties are to be gradually equipped with solar panels to generate solar power.

There are essentially two different models for running the systems: the investment model, where the Studierendenwerk pays for the panels and then takes responsibility for operation, feed-in and billing, and the leasing model, where the roof spaces are made available to Stadtwerke Bonn, for instance, and the Studierendenwerk receives some of the income.

The first roof to house an investment by the Studierendenwerk itself was that of the CAMPO-Mensa canteen on the Poppelsdorf Campus. The system has a theoretical maximum potential installed output of nearly 100 kilowatts peak (kWp) in total. Realistically, however, up to 80 kW is generated on very sunny days. As much as 104 megawatt hours (MWh) of electricity has been generated since the panels went on stream in July 2023 (figures correct as of August 2024), thus saving some 41 metric tons of CO<sub>2</sub>.

The vast majority of the electricity generated goes straight toward running the canteen, with any surplus fed into the grid. With its kitchen facilities, cooling equipment and other building services, the CAMPO-Mensa is a large consumer of electricity. Over the course of a year, the solar panels reduce the amount of energy required from elsewhere by between 7 and 8 percent.

#### ECOPROFIT certification | July 2024

Two Studierendenwerk Bonn buildings were awarded ECOPROFIT certification in July 2024: the CAMPO-Mensa on the Poppelsdorf Campus and the dormitory next door at Endenicher Allee 17.

The Studierendenwerk took part in the project for the first time for 2023/2024. In workshops and site visits and in dialogue with small and medium-sized enterprises from Bonn and the surrounding areas, the sustainability profile of the chosen pilot sites was analyzed step by step and was optimized from an environmental and economic perspective in particular.

# Carbon footprint for the canteen menu | To be completed in time for the 2025 summer semester

By the 2025 summer semester, the meals served in the canteen will be labeled with their carbon footprint. The technical and database-specific groundwork required for this has now been laid. Calculations will be done in partnership with and based on figures from Eaternity.

This labeling is a measure that was agreed together with students in a strategy process for a sustainable canteen of the future and is a response to people's desire to make informed choices. Scientific studies have shown that  $\mathrm{CO_2}$  labels do exert a slight influence.

#### Contacts and editorial team

Robert Anders, Head of Marketing & Communications
Jens-Martin Birkenstein, Head of University Catering

Web page

www.studierendenwerk-bonn.de/ueber-uns/ nachhaltigkeit

Send your ideas to nachhaltigkeit@studierendenwerk-bonn.de

## A CLOSER LOOK





Dear friends of sustainability,

The health care sector has a key role to play in the climate crisis. For one thing, climate change is having a tangible impact on people's health; for another, medical care itself is contributing in no small part to the crisis through the greenhouse gases it emits and the resources it consumes. This gives us a particular responsibility that we need to shoulder by working together. The partnership between the Faculty of Medicine, the University Hospital Bonn and Team N at the University of Bonn is vital to harness synergy effects and come up with solutions together.

The University Hospital Bonn intends to play a leading role in sustainability and protecting the environment. To this end, we have set up a Sustainability working group that is taking an interdisciplinary approach in order to deliver creative, high-impact projects to reduce environmental pollution. More information can be found on the ukb-GREEN-Ag website.

The Faculty of Medicine has also decided to incorporate the issue of sustainability at dean's office level by setting up a

Vice Dean's Office for Scientific Infrastructure and Sustainability in order to lend it greater visibility and open up a wide variety of ways to achieve it. It is here that projects will be brought together and driven forward to an even greater extent in the future, from local initiatives through to international strategic partnerships.

I would like to take this opportunity to thank everyone involved at the University Hospital Bonn, the faculty and the University, whose commitment and dedication to the sustainability cause is doing much to help us fulfill our responsibility toward the environment and future generations. Their hard work has already given rise to numerous sustainable initiatives in research, teaching and administration, from putting resource-efficient processes in place through to organizing courses and funded projects on specific topics. I hope you enjoy reading this section, which will give you a closer look at our sustainable projects.

Professor Bernd Weber

#### Sustainability in the Dean's Office in the Faculty of Medicine

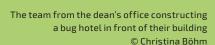
The issue of sustainability has had permanent representation in the Dean's Office in the Faculty of Medicine since December 2021 in the form of a standalone and steadily growing team. The establishment in July 2024 of the Vice Dean's Office for Scientific Infrastructure and Sustainability in the Faculty of Medicine at the University of Bonn – the first and, so far, only one of its kind in Germany – has made sustainability even more prominent within the University and the University Hospital Bonn.

Together with the two Vice Deans, Professor Wachten and Professor Beck, our team is thus helping to ensure comprehensive engagement in this area.

The Sustainability Commission has so far provided over €133,000 in funding for 12 **sustainability projects**. The commission meets twice a year and brings together

committed University professors, staff and students. Like its predecessors, the third annual Sustainability Assembly in March 2024 was another unqualified success.

Events such as the Sustainability Day and the University Hospital Bonn's summer party promote dialogue and make what we are doing more visible. We have also been a proud member of the BOOST working group since 2022. Our day-to-day work consists of projects to make the daily routine and our event management more sustainable and efforts to keep expanding our network. You can find more information on our website.





#### Sustainability in facility management

Section 6 (Facility Management) is responsible for sustainable operations and operational safety at the University Hospital Bonn, with mitigating climate change a key part of this. As well as saving resources, reducing carbon emissions, promoting biodiversity and helping to protect the environment, it also runs the hospital's own combined heat and power (CHP) plant. The three CHP modules supply heat, steam, cooling and electricity to the various buildings. The team works continuously to finetune processes and the efficiency of its equipment.

#### Facts and figures 2023:

- Share of own electricity generated >71%
- Bought-in electricity 100% green electricity
- Share of own heat, steam and cooling generated 100%
- Energy saved year on year 2%
- Reduction in carbon emissions year on year 4%

The University Hospital Bonn is also adding more solar panels every year. In 2023, for instance, it managed to generate over 220,000 kWh of green electricity. Future expansion projects are already at the planning stage.





#### Left:

The team from the Vice Dean's
Office for Scientific Infrastructure
and Sustainability at the University
Hospital Bonn's summer party in
2024; from left to right: Elena
Hachem, Christina Böhm, Julia
Meis-Harris
Photo: Vanesa Deva

#### Right:

The two vice deans, Professor Dagmar Wachten (left) and Professor Heinz Beck (right) Photo: Elena Hachem

#### Some more examples of sustainable engagement:

#### Digital management of reusable/ recyclable materials

Optimized digital waste management for maximum recycling rates and to preserve and retain reusable/recyclable materials.

#### Sustainable mobility management

Mobility services such as local public transport, carsharing, ridesharing, a carpooling app, funding for bikes, a bike repair shop, charging stations, an autonomous e-shuttle and many more.

#### Biodiversity in the "generation forest"

By conserving and planting over 2,000 new plants for the "generation forest," we are giving our staff and patients somewhere to relax and native animal species somewhere to live.

#### A cable car for Bonn

We at the University Hospital Bonn are continuing to give our strong backing to the sustainable transport project attempting to bring a cable car to Bonn.

#### Sustainability Report

CSRD reporting in accordance with the eponymous EU Directive before 2026. Divided into three areas: environmental, economic and social.

#### Greenhouse gas emissions

Formulating a master plan for climateneutral energy generation.

#### Sustainability in anesthesia in 2024

The Green Team in the Clinic for Anesthesiology and Surgical Intensive Care Medicine at the University Hospital Bonn is working hard to implement the recommendations made in a recent position paper on environmental sustainability in anesthesiology and intensive care medicine. As well as reducing anesthetic gas consumption, a multicentric study on sustainable anesthesia induction is also under way, investigating algorithms that could help reduce the environmental impact of volatile anesthetics. Another of its tasks is to produce life cycle assessments for the sustainable procurement and use of materials.

As well as the training provided to students in the form of the "Green Anaesthesia" lecture series, the first courses dedicated to the "green hospital" have also now been held in our School for Anesthesia and Surgical Assistant Professions.

More details of the individual aspects can be found **here**.



### Sustainability in the Health and Risk Communication laboratory

The project entitled "Food for Future – on the Way to Sustainable Hospital Catering" is geared toward reducing meat consumption in hospital catering and thus shrinking the hospital's carbon footprint. The University Hospital Bonn offers three lunch options every day, and online experiments have shown that increasing the number of vegetarian meals from one to two can cut meat consumption without having to sacrifice meat dishes entirely.

Visit our **web page** for the latest updates on the project.

A survey of patients revealed that they are satisfied with the current lunch provision and that they would welcome more vegetarian options. These findings are presently being incorporated into the menu together with the Health and Risk Communication laboratory, the hospital's Catering team and the Nutrition Commission.



#### **Health for Future**

Health for Future Bonn and Psychologists for Future have launched the **Klimacafé** climate café, a monthly meet-up that everyone is welcome to attend in order to discuss sustainability and the climate crisis.

You can read more about Health For Future on our Instagram page @healthforfuture-bonn.

# Quantitative analysis of waste generated in orthopedics and trauma surgery

In the 1980s, the rise in infectious diseases led to the increased use of single-use items and growing volumes of waste, especially in surgical disciplines such as orthopedics and trauma surgery. Up until now, there have

been few if any scientific studies done into the quantity and composition of the waste generated. It is suspected that between 50 and 90 percent of surgical waste is disposed of incorrectly as clinical waste, resulting in higher costs and toxic emissions. We want to calculate these volumes of waste and identify where savings can be made in order to reduce environmental pollution and lower costs. Among other things, we have determined that longer surgical procedures generate more waste (see Fig. 2 A). Whereas the level of experience of the surgeon does not affect the amount of waste generated (see Fig. 2B), location/localization is probably a factor (see Fig. 2 C).





6.3 kg of waste generated by a single-stage balloon kyphoplasty performed by the orthopedics and trauma surgery team at the University Hospital Bonn (a procedure lasting 10–15 minutes)

© University Hospital Bonn

#### Sustainability in surgery

In October 2022, surgeons at the University Hospital Bonn launched a project to recycle single-use surgical instruments in partnership with the company Resourcify in a bid to reduce the incineration of waste – a carbonintensive process.

As much as 805 kg of material has been able to be recycled at the hospital since the project began two years ago, saving 1,836 kg worth of  ${\rm CO}_2$ . This equates to the emissions from a direct flight from Cologne/Bonn Airport to Tokyo by a Boeing 737 or the same amount that 147 trees can absorb in a year.

#### Its total contribution

September 1, 2022 to September 30, 2024



of CO<sub>2</sub>e saved



pallet cages collected



of material recycled



equivalent as CO<sub>2</sub> savings

#### >> We're here for you!

The Green Office at the University of Bonn



Our most heartfelt thanks go to everyone who helped to create this reader.

#### Masthead

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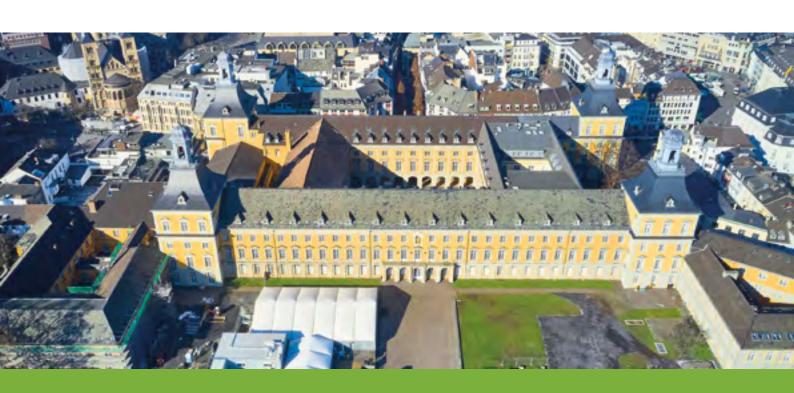
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