



Planetary Health Report Card (Medicine): *University Heidelberg*



UNIVERSITÄT
HEIDELBERG
ZUKUNFT
SEIT 1386

2024-2025 Contributing Team:

- Students: *Ilsa Beig**, ilsa.beig@med.uni-heidelberg.de
- Faculty Mentors: *Alina Herrmann, MD*

*Primary Contact: name, email

Land acknowledgment:

Summary of Findings

Overall Grade	C+
Curriculum	C+
<ul style="list-style-type: none"> Several disciplines include aspects of Planetary Health in the core curriculum. However, the mentioning in the teaching materials is mostly brief and the way content is conveyed depends on the respective lecturer. Some areas such as reproductive health are currently still absent, while others such as impact on cardiovascular health are mentioned only briefly which does not do justice to their importance. In general these aspects are not seen to be relevant for examinations. Recommendations: Integrate planetary health topics across all areas of the core curriculum to ensure education and awareness. Additionally, more local environmental aspects should be included, incorporating perspectives from marginalized communities and individuals who are directly or will be in the future affected by the impacts of climate change. 	
Interdisciplinary Research	A-
<ul style="list-style-type: none"> The University of Heidelberg has several research groups either dedicated to Planetary Health and sustainable Health systems or include aspects within their broader research. Recommendations: On an institutional level, we could not find the university faculty listed as a member of any Planetary Health or ESH organization. We see potential in starting and strengthening connections with larger national and international movements. 	
Community Outreach and Advocacy	C-
<ul style="list-style-type: none"> There are some educational offerings available; however, they usually need to be actively sought out, and there are no easily accessible resources or awareness initiatives for patients. Recommendations: Improve accessibility and reduce barriers to ensure broader reach and impact. 	
Support for Student-Led Initiatives	C
<ul style="list-style-type: none"> There are several opportunities for information, engagement, and participation in scientific projects. However, these often require additional personal commitment, which can pose financial issues or other barriers for some. Recommendations: Provide increased support, including dedicated grants for students interested in sustainable initiatives, to reduce barriers and encourage participation. 	
Campus Sustainability	C
<ul style="list-style-type: none"> There has been good progress in making the campus and university hospital more sustainable, particularly in the areas of energy supply and sustainable transportation opportunities for staff and students. There are staff members and initiatives actively working to further improve these areas. However, no binding targets regarding the institution's carbon footprint have been set, and there is no known timeline with clear commitments. Recommendations: Establish a comprehensive sustainability plan with concrete, time-bound goals to systematically reduce the institution's environmental impact. 	

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as “a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change “the greatest threat to global health in the 21st century,” many medical school’s institutional priorities do not reflect the urgency of this danger to human health.

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients’ health. This preparation is in the hands of the institutions providing our medical training. It is imperative that we hold our institutions accountable for educating medical students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices as much as possible, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect vulnerable populations (for example, communities of colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among health professional schools, we have created a Planetary Health Report Card that students internationally can use to grade and compare their institutions on an annual basis. This student-driven initiative aims to compare health professional schools nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) university support for student planetary health initiatives, and 4) community outreach centred on environmental health impacts 5) medical school campus sustainability.

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilisation and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
 1. Describe how the environment and human health interact at different levels.
 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
 3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School/Department vs. Institution:** When “Medical school” is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is

specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Core Curriculum:** This refers to taught material that is delivered to the entire cohort of students in one year.
- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.
- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).
- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.
- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.
- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.
- **Extractivism:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to

the historic seizing of natural resources, a practice which has developed business models tied to ecological degradation and loss of biodiversity.

- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.
- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.
- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.
- **Anthropogenic:** Created through human activity
- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

Other considerations:

- If there are more than one “tracks” at your institution with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples). Where possible please indicate the proportion of students that are on each track.

Completed in 2022 a [Literature Review by Metric](#) is available for the 2022 medicine report card metrics. We are in the process of updating this review and making it more applicable to all the disciplines. However the review serves as a rough collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

Section Overview: *This section evaluates the integration of relevant planetary health topics into the medical school curriculum. Today's medical students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that medical students are trained to understand the health effects of these changes, as well as planetary health issues and principles more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.*

Curriculum: General

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health. (1 points)	
No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	1
<i>Score explanation:</i> <i>In the elective module "General Medicine/ Primary Care" there is a lecture titled "Climate Change and Health". Additionally, some elective courses include aspects of Planetary Health such as the issue and management of multidrug resistant pathogens and "The Age of Pandemics" in the elective module "Interdisciplinary Infectiology".</i>	

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?
This topic was explored in depth by the core curriculum. (3 points)
This topic was briefly covered in the core curriculum. (2 points)
This topic was covered in elective coursework. (1 point)

This topic was not covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>Nephrology: The core curriculum addresses the impact of heat on both acute and chronic renal failure in a lecture.</p> <p>Geriatrics: The core curriculum addresses the heightened vulnerability of elderly individuals to heat regarding the physiological changes with aging and the presence of coexisting comorbidities. Additionally the department of geriatrics offers an elective colloquium “Planetary Health and Geriatrics”.</p> <p>Pharmacology: The core curriculum examines the mechanisms by which heat may influence drug therapy. It also includes a heat-related drug impact table, outlining potential changes in drug effects and measures to mitigate associated risk.</p> <p>Surgery: In surgery a lecture mentions that studies suggesting an increase in surgical wound infections at higher temperatures.</p> <p>Sports medicine: The issue of heat during major sport events is discussed in a lecture within the core curriculum.</p> <p>Cardiology: The relationship between heat and cardiovascular risk is briefly addressed within an elective module “Heart, Blood and Metabolism”.</p>	

1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i></p> <p>Environmental Medicine: The core curriculum includes a full lecture “Health Impacts of Environmental Disasters and Climate Change in Germany”</p> <p>Geriatrics: The core curriculum mentions how vulnerability factors make older adults more susceptible to extreme weather events.</p> <p>Gastroenterology: The core curriculum addresses increased risks of infectious diseases due to extreme weather, such as Hepatitis A and E outbreaks during floods and the potential rise of parasitic diseases.</p> <p>Psychiatry: In the core curriculum a lecture addresses the psychological impact of extreme weather events and climate-related displacement, including the development of post-traumatic stress disorders.</p>	

1.4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?

This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>Gastroenterology: In the core curriculum shifts in the distribution of pathogens, such as <i>Vibrio</i> species, due to changing climate zones are addressed in a lecture.</p> <p>Geriatrics: The core curriculum addresses increased risks of waterborne diseases (e.g., leptospirosis, salmonellosis) after floods, particularly for older adults who are more vulnerable to severe gastrointestinal infections and reduced vaccine efficacy in older adults due to age-related immune decline in the context of potential emergence of new viral diseases.</p> <p>Environmental medicine: The core curriculum includes a lecture “Health effects of environmental disasters and climate change in Germany” within shifts in the distribution of infectious disease vectors are addressed.</p>	

1.5. Does your <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>Geriatrics: The core curriculum mentions that older adults are affected by air pollution, with heatstress and pollutants exacerbating chronic conditions like asthma, COPD and pulmonary arterial hypertension, leading to higher hospitalization rates.</p> <p>ENT: The core curriculum addresses the role of particulate matter in promoting conditions such as rhinosinusitis, pharyngitis and laryngitis with significant regional differences potentially linked to pollutant exposure.</p>	

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat
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This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>Geriatrics: The core curriculum addresses in a lecture pre-existing conditions like heart failure further impairing thermoregulation due to the increased cardiac output required for heat adaptation.</p> <p>Cardiology: The relationship between heat and cardiovascular risk is briefly addressed within an elective module “Heart, Blood and Metabolism”</p>	

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>Geriatrics: The core curriculum addresses increased risks of cognitive decline, PTSD, depression, and suicide during heatwaves, with older adults particularly vulnerable due to reduced physical and psychological flexibility, as well as disruptions to social networks and infrastructure caused by extreme weather events.</p> <p>Psychiatry: In the core curriculum a lecture addresses the psychological impact of extreme weather events and climate-related displacement, including the development of post-traumatic stress disorders.</p>	

1.8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	

This topic was not covered.	
Score Assigned:	1
<p><i>Score explanation:</i> Medical Ethics: The core curriculum includes a group work session with different social issues to discuss. The group “Climate resilient health systems” includes a slide discussing the impact of climate change on food- and waterquality as well as air pollution, and the resulting diseases that place a burden on the healthcare system. Since each student group chooses only one topic, we considered this as elective coursework.</p>	

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<p><i>Score explanation:</i> Medical Ethics: The core curriculum includes a group work session with different social issues to discuss, including the disparity between high-income countries' responsibility for climate change and its disproportionate impact on low socioeconomic status groups. Geriatrics: The core curriculum addresses in a lecture the vulnerability of elderly populations to infectious diseases.</p>	

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	1
<p><i>Score explanation:</i> Medical Ethics: In the group work sessions, where students select one topic to discuss (as mentioned above), the climate justice group includes an introductory slide illustrating the disproportionate global risks of climate change impacts. Since each student group chooses only one topic, we considered this as elective coursework.</p>	

Curriculum: Environmental Health & the Effects of Anthropogenic Toxins on Human Health

1.11. Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

0

Score explanation:

The issue of reproductive health in the context of environmental toxins is not a regular part of the core curriculum. One pharmacology lecturer mentioned briefly addressing this topic verbally in her lecture, but it is unclear whether other lecturers do the same.

1.12. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

0

Score explanation:

There are no known curriculum contents of human-caused environmental threats that are relevant to the university's surrounding community in the core curriculum. It could not be assessed whether this topic has been mentioned in elective coursework, such as primary care, but it is unlikely to be included regularly.

1.13. To what extent does your medical school emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was not covered.	
Score Assigned:	0
<i>Score explanation:</i> <i>No known curriculum contents exist. There have been lecture series in other degree programs at the same university that could potentially be credited towards academic work in the medical faculty.</i>	

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<i>Score explanation:</i> ENT: <i>The core curriculum addresses the additional respiratory burden caused by fine particulate matter in a lecture, highlighting its role in conditions such as rhinosinusitis, pharyngitis, and laryngitis, as well as lower respiratory tract diseases, with regional differences in chronic rhinosinusitis prevalence potentially linked to higher exposure to pollutants within a lecture. We think this indirectly addresses an especially high impact on marginalized populations.</i>	

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<i>Score explanation:</i> Gastroenterology: <i>The curriculum addresses the environmental and health co-benefits of a plant-based diet in a lecture, highlighting the positive health impacts of fiber intake and the sustainability aspects of dietary choices.</i>	

Sports medicine: A lecturer has verbally mentioned the relevance of planetary boundaries in dietary patterns, though this is not a regular part of the curriculum.

1.16. Does your medical school curriculum address the carbon footprint of healthcare systems?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

2

Score explanation:

Pharmacology: The carbon footprint of the healthcare system and the KliOL project (discussed later in the report) on optimizing supply chains are covered in a lecture.

Nephrology: The carbon footprint of different renal replacement therapies and potential approaches to making dialysis more sustainable are integrated into the regular lecture.

Anesthesia module: In a lecture, the environmental harm of anesthetic gases is presented with an example of one anesthesia using inhaled anesthetics in extreme cases corresponds to the CO₂ equivalent of up to 9067.0 km of car travel.

Additional content is included in elective courses, such as the mentioned group work in Medical Ethics and the elective module "General Medicine / Primary Care."

Although the topic is covered quite in depth, it has not been designated as exam-relevant in any subject area known to us. Therefore, we have assigned a score of 2.

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (points for each)

Score

The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment (2 points)

1

The environmental impact of **pharmaceuticals** and over-prescribing as a cause of climate health harm. Alternatively teaching on **deprescribing** where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .

1

The health **and** environmental **co-benefits** of **non-pharmaceutical management** of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)

1

Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	1
The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	1
The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	0
Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	1
<p><i>Score explanation:</i></p> <p>1.+2+3. The environmental impact of pharmaceutical residues, particularly antibiotics, antidepressants, contrast agents, and hormone-containing pain creams, is covered in a pharmacology lecture. The "Choosing Wisely" initiative by the German Society for Internal Medicine (DGIM) is mentioned on a slide to address over- and under-prescription. Geriatrics also discusses reducing overprescription and instead emphasizes sustainable, preventive measures such as green mobility and assistive devices. However, no concrete deprescribing case studies or co-benefits are explicitly mentioned, leading to a partial score.</p> <p>4.+5: In surgery, the major contribution of operating rooms to emissions, sources including anesthetic gases and energy consumption are addressed in a lecture. The pharmacology lecture also briefly mentions the climate impact of anesthetic gases. In the anesthesia module, the environmental impact of inhaled anesthetics is addressed, with a focus on the phasing out of desflurane and nitrous oxide, as well as the department's internal standard for minimal flow anesthesia.</p> <p>7. The carbon footprint of the healthcare system and waste reduction strategies are integrated into the hygiene module's regular lectures.</p>	

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework. (1 points)	
No, there are not strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i></p> <p>In the elective module "General Medicine/ Primary Care" there is a lecture titled "Climate Change and Health" which includes strategies to have conversations about climate change. In the teaching of students within their electives in their final year, there were offerings on climate-sensitive communication. However, these courses are only accessible to some students and</p>	

are voluntary. In an ENT lecture there is one slide of climate-sensitive counseling regarding allergy management (e.g., using a pollen monitor) and the synergistic effects of climate protection and health protection through clean air; however they are not presented as strategies.

1.19. In training for patient encounters, does your medical school's curriculum introduce strategies for taking an environmental history or exposure history?

Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)

Only **elective** coursework includes strategies for taking an environmental history. (1 point)

No, the curriculum does **not** include strategies for taking an environmental history. (0 points)

Score Assigned:

0

Score explanation:

In the field of thoracic surgery, there are interactive seminars in which exposure history is considered as part of the anamnesis, however, no standardized strategy is applied or taught.

Curriculum: Administrative Support for Planetary Health

1.20. Is your medical school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?

Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)

Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education. (2 points)

No, there are **no** improvements to planetary health education in progress. (0 points)

Score Assigned:

4

Score explanation:

Since 2023, a curriculum for Planetary Health and Sustainability in Medicine (Curriculum PlaN-Med

<https://www.medizinische-fakultaet-hd.uni-heidelberg.de/studium-lehre/studium/medizin/lehrkonzepte/projekte-veranstaltungen/curriculum-plan-med>) has been under development and is gradually being implemented within the clinical study phases of medical education in Heidelberg. The project is led and overseen by two physicians, two research associates, and a student assistant. While new teaching formats are being specifically designed, the primary focus is on identifying intersections with existing course content and supporting lecturers in integrating relevant topics with minimal additional effort. The goal is to equip Heidelberg medical students with essential knowledge and competencies in the areas of climate change and planetary health.

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
Planetary health/ESH topics are well integrated into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) . (2 points)	
There is minimal/no education for sustainable healthcare. (0 points)	
Score Assigned:	4
<i>Score explanation:</i> <i>In the clinical phase of medical education (year 3–6), ESH and Planetary Health are integrated into multiple disciplines and additional learning sessions, however, no exam relevance has been established yet. During the first two years, which focus on basic scientific principles, the presence of these topics depends on individual lecturers and is not yet a standardized part of the curriculum.</i>	

1.22. Does your <u>medical school</u> employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?	
Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	1
<i>Score explanation:</i> <i>In the PlaN-Med project (see 1.20), two physicians, two research associates, and a student assistant are employed and responsible for overseeing the curricular integration of planetary health and sustainable healthcare.</i>	

Section Total (40 out of 72)	56 %
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Interdisciplinary Research

Section Overview: This section evaluates the quality and quantity of interdisciplinary planetary health research at the broader institution. Interactions between health and the environment are complex and multifactorial. While climate change has been extensively studied from an environmental science perspective, planetary health is an emerging field. As leading health institutions with talented researchers and research resources, institutions should fund research studying the health effects of climate change and anthropogenic environmental toxins. This obligation is particularly strong because the public and policymakers are more attentive to climate change when its implications for human health are emphasised.

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your **institution**?

Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)

Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, **OR** are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)

There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)

No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)

Score Assigned:

3

Score explanation:

At the Heidelberg Institute of Global Health (HIGH), several research groups focus primarily on Planetary Health and Healthcare Sustainability, including:

- *Climate Change and Health Intervention*
- *Climate Change, Nutrition and Health*
- *Climate Change, Migration and Health*
- *Climate-Sensitive Infectious Disease Lab (CSIDLlab)*
- *Climate-Smart Health Systems*

The head of the Climate-Smart Health Systems group, Alina Herrmann, is also involved in the PlaN-Med project, working on the integration of Planetary Health (PH) and Education for Sustainable Healthcare (ESH) into the medical curriculum.

We were unable to contact all researchers, but the following can be named as conducting research related to planetary health or healthcare sustainability, though not as their primary focus:

- *Christoph Nikendei (Department of general internal medicine and psychosomatics) conducts research on mental health, displacement, and trauma in the context of climate change*

- *At the Institute for Infectious Diseases and Tropical Medicine, as well as in the Department of Pharmacology, there are several projects that indirectly relate to planetary health, such as those focusing on antibiotic stewardship. Specific projects we are aware of include a study on tick-borne diseases in Germany and a project on cat rabies in Mexico, which takes environmental and sociodemographic factors into account.*

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?

There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)

There is **not currently** a department or institute for interdisciplinary planetary health research, but there are **plans** to open one in the next 3 years. (2 points)

There is an **Occupational and Environmental Health department**, but no interdisciplinary department or institute for planetary health research. (1 points)

There is **no** dedicated department or institute. (0 points)

Score Assigned:

3

Score explanation:

The Heidelberg Institute of Global Health (HIGH) is dedicated to interdisciplinary planetary health. However, it also has additional research focuses in the fields of epidemiology, biostatistics, and global health.

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?

Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)

Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)

No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points)

There is **no** process, and **no** efforts to create such a process. (0 points)

Score Assigned:

2

Score explanation:

We are aware of two projects that involve communities disproportionately impacted by climate change and environmental injustice: one focused on drug development for neglected tropical

diseases and another centered on placing the values and preferences of people most affected by Tuberculosis at the core of screening and testing (<https://pubmed.ncbi.nlm.nih.gov/38381805/> <https://bmcbglobalpublichealth.biomedcentral.com/articles/10.1186/s44263-023-00027-0>)
The Heidelberg Institute of Global Health (HIGH) does participatory research, yet not on the broader research agenda.

2.4. Does your **institution** have a planetary health website that centralises ongoing and past research related to health and the environment?

There is an **easy-to-use, adequately comprehensive** website that **centralises** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)

There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)

The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)

There is **no** website. (0 points)

Score Assigned:

2

Score explanation:

The mentioned website provides an overview of activities, research, and offerings across the entire faculty. It allows for a cross-degree search of courses related to sustainability. However, the listing is not complete for all programs, including medicine.

<https://www.uni-heidelberg.de/de/universitaet/das-profil-der-universitaet-heidelberg/nachhaltigkeit>

2.5. Has your **institution** recently hosted a conference or symposium on topics related to planetary health?

Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)

Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)

Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)

The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)

No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)

Score Assigned:	4
<i>Score explanation:</i> https://www.globalhealth.de/news/view/advancing-research-opportunities-at-the-intersection-of-cardiovascular-health-and-planetary-health	

2.6. Is your <u>institution</u> a member of a national or international planetary health or ESH/ESV organisation?	
Yes, the institution is a member of a national or international planetary health or ESH/ESV organisation. (1 points)	
No, the institution is not a member of such an organisation. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> We couldn't find the university faculty listed as a member of any planetary health or ESH organization. However, the university hospital is a member of https://klimeg.de/ , a national organization and competence network that supports healthcare institutions in becoming more sustainable.	

Section Total (14 out of 17)	82%
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Community Outreach and Advocacy

Section Overview: This section evaluates medical school engagement in community outreach and advocacy efforts associated with planetary health. Researching and teaching planetary health is necessary but not sufficient. It is critical that institutions also directly engage with communities most affected by environmental health harms. Although climate change is a problem largely created by those with power and resources, its impacts fall disproportionately on under-resourced populations and communities of colour. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.

3.1. Does your <u>institution</u> partner with community organisations to promote planetary and health?	
Yes, the institution meaningfully partners with multiple community organisations to promote planetary and environmental health. (3 points)	
Yes, the institution meaningfully partners with one community organisation to promote planetary and environmental health. (2 points)	
The institution does not partner with community organisations, but has participating in community focused events relating to planetary health. (1 point)	
No, there is no such meaningful community partnership. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i> <i>Researchers from the Heidelberg Institute of Global Health have participated in the local health conference (Kommunale Gesundheitskonferenz), contributing to discussions on planetary health and sustainability, we are not aware of any other activities by research groups, but this does not exclude the possibility that such activities have taken place.</i></p>	

3.2. Does your <u>institution</u> offer community-facing courses or events regarding planetary health?	
The institution offers community-facing courses or events at least once every year. (3 points)	
The institution offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)	
The institution has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)	
The institution/medical school have not offered such community-facing courses or events. (0 points)	

Score Assigned:	2
<p><i>Score explanation:</i> The university has offered the following public lecture series that we are aware of. However, the target audience is mostly from an academic background https://www.medizinische-fakultaet-hd.uni-heidelberg.de/fileadmin/medizinische_fakultaet/Institute/Geschichte_und_Ethik/Flyer_IGEM/VeranstaltungsreiheWiSe2024_2025.pdf</p>	

3.3. Does your <u>institution</u> have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)	
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to some courses . (1 point)	
Students do not receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i> News and issues regarding Planetary Health and Sustainable Healthcare are communicated through the university hospital's app and website. Additionally, newsletters from student organizations often include these topics. However, there is no guaranteed system ensuring that all students receive all information.</p>	

3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?	
Yes, the institution or main affiliated hospital trust offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)	
Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)	
There are no such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	2
<p><i>Score explanation: Insert explanation here.</i> An online course titled "Ärztliche Basisschulung Klimawandel und Gesundheit" (Basic Training on Climate Change and Health) is offered, which is also accredited for continuing medical education</p>	

(CME) points for physicians

(<https://high-edu.courses/courses/course-v1:HIGH+AdaptNet1+2023/about>)

For university lecturers, there is a "Train the Trainer" program that covers content on Planetary Health and Sustainable Healthcare, as well as teaching methodologies.

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?

Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)

Some affiliated hospitals have accessible educational materials for patients. (1 point)

No affiliated medical centres have accessible educational materials for patients. (0 points)

Score Assigned:

0

Score explanation:

There are no accessible educational materials for patients known to exist.

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?

Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)

Some affiliated hospitals have accessible educational materials for patients. (1 point)

No affiliated hospitals have accessible educational materials for patients. (0 points)

Score Assigned:

0

Score explanation:

There are no accessible educational materials for patients known to exist..

Section Total (6 out of 14)

43%

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Support for Student-Led Planetary Health Initiatives

Section Overview: This section evaluates institutional support for student-led planetary health initiatives, such as funding, fellowships, programming, and student groups. Planetary health is a young field and, as young people facing a future deeply shaped by climate change, students are often some of the first at an institution to engage with it. Institutions should provide support for students to engage in sustainability quality improvement (QI) initiatives, discover mentors in their area of interest, and receive funding for planetary health projects.

4.1. Does your <u>institution</u> offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum. (2 points)	
The institution encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate. (1 point)	
No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i> <i>The university offers the possibility to apply for funding to improve the quality of teaching (QSM-Mittel in Germany). However, there is no distinction regarding the sustainability of projects in relation to the chances of receiving this funding.</i></p>	

4.2. Does your <u>institution</u> offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)	
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these require student initiative to seek these out and carry them out in their spare time. (1 point)	
There are no opportunities for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i> <i>There are several opportunities for students to connect research with Planetary Health, for example in Global Health, Geriatrics, Infectiology,... However, we are not aware of a structured program; instead, individual initiative is required. Most projects are conducted in addition to the regular curriculum, often in students' free time or during a leave semester.</i></p>	

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.

The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. (1 point)

There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)

Score Assigned:

1

Score explanation:

The PlaN-Med curriculum website provides some information and materials, as well as contact details. However, not all projects are listed, and updates are not always fully up to date.

4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?

Yes, there is a student organisation **with faculty support** at my medical school dedicated to planetary health or sustainability in healthcare. (2 points)

Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support**. (1 point)

No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)

Score Assigned:

1

Score explanation:

There is a local Health4Future group that is also registered at the university (as an initiative of the student council). However, there is no faculty or teaching staff officially supporting the group. <https://healthforfuture.de/ortsgruppen/>

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?

Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	0
<p><i>Score explanation:</i> According to the State Higher Education Act (Landeshochschulgesetz in German), students are members of the decision-making Study Commission. The Dean's Office for Student Affairs is in regular exchange with the student council and members of the Study Commission, where sustainability topics are also discussed. However, to our knowledge, there are no students specifically representing sustainability interests in these meetings.</p>	

4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	Score
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	0
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
<p><i>Score explanation:</i> -at a conference for student tutors, a workshop on climate-sensitive communication in health counseling was offered. -as part of the final-year student curriculum, several lecturers were invited who integrate Planetary Health into their fields (Pharmacology, Psychosocial Medicine, Global Health). Since participation in these sessions is partly voluntary (students must fulfill a general attendance requirement but can choose sessions), we would categorize this as a speaker series. -the university hospital, in collaboration with research institutes, organized Earth Week https://klimanetz-heidelberg.de/earth-week-am-22-27-april-in-heidelberg/ which included workshops on insect-friendly planting, waste collection initiatives, and a quiz on the environmental impact of different foods. - as part of the university's sports program, activities such as hut trekking, hiking, and kayaking are offered.</p>	

https://www.hochschulsport.issw-hd.de/index.php?option=com_content&view=article&id=396&Itemid=294#12

Section Total (7 out of 15)

47%

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Campus Sustainability

Section Overview: *This section evaluates the support and engagement in sustainability initiatives by the institution. The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.*

5.1. Does your <u>institution</u> have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of hospital sustainability. (2 points)	
There are no salaried sustainability staff , but there is a sustainability task force or committee. (1 point)	
There are no staff members or task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i> Since 2022, a Sustainability and Climate Protection Unit has been established with the task of implementing the sustainable transformation of the University Hospital Heidelberg (UKHD). This unit coordinates the activities of several full-time employees working on sustainability-related topics. https://www.klinikum.uni-heidelberg.de/organisation/verwaltung/nachhaltigkeit-und-klimaschutz/stabsstelle</p>	

5.2. How ambitious is your <u>institution's</u> plan to reduce its own carbon footprint?	
The institution has a written and approved plan to achieve carbon neutrality by 2030 (5 points)	
The institution has a written and approved plan to achieve carbon neutrality by 2040 (3 points)	
The institution has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate (1 point)	
The institution/medical school does not meet any of the requirements listed above (0 points)	
Score Assigned:	1

Score explanation:

The Sustainability and Climate Protection Unit has applied for funding to develop a climate protection concept with an emissions reduction pathway. However, there is currently no concrete plan for achieving climate neutrality.

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?

Yes institution buildings are **100%** powered by renewable energy. (3 points)

Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)

Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)

Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)

Score Assigned:

2

Score explanation:

Excluding the hospital from the assessment was not feasible, as most teaching facilities are located within the university hospital. Heidelberg University sources 100% of its electricity from renewable hydropower. Additionally, cooling is partially powered by electricity, while the remaining cooling and heating requirements are met by a combined heat and power plant (CHP) operated with natural gas.

5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?

Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)

Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted**. (2 points)

Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)

Sustainability is **not considered** in the construction of new buildings. (0 points)

Score Assigned:

2

Score explanation:

It was difficult to obtain concrete information, but we were able to determine that sustainability played a significant role in the construction of a new Heart Center and staff housing. However, many older buildings on campus still have outdated materials and insulation concepts

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?

Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)

The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)

The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)

Score Assigned:

2

Score explanation:

For employees, the university covers 50% of the cost of a nationwide public transport ticket for regional travel. Students can purchase a semester ticket to use public transportation within the region. Additionally, there is availability of rental bikes ("Nextbikes") on campus and throughout the city, which can be used for free for the first 30 minutes and at a low cost afterwards by both students and staff.

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?

Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)

The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)

There is **no** compost or recycling program at the medical school. (0 points)

Score Assigned:

1

Score explanation:

There are recycling bins on campus, but there is not an organics recycling program with compost bins available for students or faculty. At the university hospital, paper, glass, and specific plastics are mostly separated, while food waste is sent to a biogas plant within the city. However, there is no waste separation in visitor/patient areas, as the waste is considered potentially contaminated and must be incinerated

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?

Yes, the institution has **adequate** sustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)

There are **no** sustainability guidelines for food and beverages. (0 points)

Score Assigned:

0

Score explanation:

The Sustainability and Climate Protection Unit is in contact with the food service management to make catering more sustainable. For example, the number of meat-based meals has been reduced, and the availability of plant-based alternatives has increased. However, no explicit guidelines have been established or enforced by the university.

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?

Yes, the institution has **adequate** sustainability requirements for supply procurement **and is engaged** in efforts to increase sustainability of procurement. (3 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)

There are **no** sustainability guidelines for supply procurement. (0 points)

Score Assigned:

2

Score explanation:

The institution uses the EcoVadis platform (<https://ecovadis.com/de/>), which evaluates companies based on sustainability and fair trade criteria. As of 2024, around 85% of suppliers have been certified through this platform. The institution actively encourages its suppliers to obtain EcoVadis ratings. Efforts are also made to prioritize reusable goods whenever possible; for instance, disposable surgical gowns have been replaced with washable ones. However, it was noted that for many pharmaceutical products, which lack sustainability ratings, there are no alternative options available.

Over the past three years, the KliOL project has aimed to reduce approximately 6,000 tons of greenhouse gas emissions (measured in CO2 equivalents) at Heidelberg University Hospital (UKHD) and is currently conducting quantitative and qualitative monitoring of the outcomes.

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?

Every event hosted at the institution **must** abide by sustainability criteria. (2 points)

The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required**. (1 point)

There are **no** sustainability guidelines for institution events. (0 points)

Score Assigned:

0

Score explanation:

There are no known sustainability requirements or guidelines for events—it depends on the individual organizers. However, the use of single-use products has been reduced over the past few years.

5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?

Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)

There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)

There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)

Score Assigned:

2

Score explanation:

The laboratories of the university hospital and faculty can voluntarily participate in the My Green Lab certification program (<https://www.mygreenlab.org/>). However there is no coordination or network connecting all laboratories in this effort and no universal guidelines have been established.

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?

The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is entirely divested from fossil fuels. (3 points)	
The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments. (2 points)	
The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> <i>There couldn't be concrete information obtained. The (likely) responsible professions couldn't be reached via our messages.</i>	

Section Total (15 out of 32)	47%
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Grading

Section Overview

This section focuses on the grading of the report card. The institution received a grade for each of the individual sections as well as an overall institutional grade. Section point totals were tallied, divided by the total points available for the section, and converted to a percentage. The overall institutional grade is a weighted average of the section grades, with curriculum receiving a higher weight owing to its larger number of metrics. Letter grades for each section and the institution overall were then assigned according to the table below.

Letter Grade*	Percentage
A	80% - 100%
B	60% - 79%
C	40% - 59%
D	20% - 39%
F	0% - 19%

Planetary Health Grades for the Heidelberg University School of Medicine

The following table presents the individual section grades and overall institutional grade for the Heidelberg University School of Medicine on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(40/72) \times 100 = 56\%$	C+
Interdisciplinary Research (17.5%)	$(14/17) \times 100 = 82\%$	A-
Community Outreach and Advocacy (17.5%)	$(6/14) \times 100 = 43\%$	C-
Support for Student-led Planetary Health Initiatives (17.5%)	$(7/15) \times 100 = 47\%$	C
Campus Sustainability (17.5%)	$(15/32) \times 100 = 47\%$	C
Institutional Grade	$(A \times 0.3 + B \times 0.175 + C \times 0.175 + D \times 0.175 + E \times 0.175) = 55\%$	C+