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# **Planetary Health Report Card (Medicine):**

## ***School of Medicine at the University of Minho***

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Universidade do Minho  
Escola de Medicina

2024-2025 Contributing Team:

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Land acknowledgment:

## Summary of Findings

Overall Grade	C-
Curriculum	C-
<ul style="list-style-type: none"> <li>The University of Minho's School of Medicine incorporates planetary health topics in a cursory manner within its curriculum. While they have introduced a "Climate Change and Health" module to equip students with crucial insights into climate change's health impacts, dedicated planetary health courses are absent. Instead, the subject is sporadically mentioned when relevant to the primary course content. In laboratory sessions, sustainability concepts are primarily conveyed through explanations to students, rather than integrated practical applications.</li> <li><b>Recommendations:</b> Given that the curriculum already includes modules and elective courses on planetary health, the School of Medicine could consider focusing on enhancing faculty preparedness and practical skills integration. This can be achieved by developing targeted training programs for educators to effectively teach planetary health concepts and by creating structured clinical scenarios that enable students to confidently discuss environmental health impacts with patients. Additionally, incorporating planetary health considerations into clinical skills assessments will ensure that students not only understand these concepts theoretically but can also apply them meaningfully in real-world healthcare interactions.</li> </ul>	
Interdisciplinary Research	D+
<ul style="list-style-type: none"> <li>At the University of Minho, several conferences have been held to raise awareness about Climate Change, though none have been organized by the School of Medicine. Notably, there is no ongoing research in the field of planetary health at the School of Medicine of the University of Minho. Moreover, at the level of the University of Minho's organization, including the School of Medicine, efforts have been made regarding sustainability issues, involving various areas of the university.</li> <li><b>Recommendations:</b> The medical faculty might explore conducting studies on planetary health, as this could provide students with valuable exposure to such initiatives. This approach would offer the student body a chance to engage directly with research in this emerging field.</li> </ul>	
Community Outreach and Advocacy	D
<ul style="list-style-type: none"> <li>At the School of Medicine of the University of Minho, there is limited community outreach in environmental health. In fact, the Students' Medicine Nucleus of the University of Minho (NEMUM) is a partner of the School of Medicine, promoting the involvement of the student community in this area of environmental and sustainable health. In addition, other student organizations at the University also organize initiatives related to sustainability activities.</li> <li><b>Recommendations:</b> The School of Medicine could consider collaborations with community-focused organizations, facilitating novel initiatives to promote awareness of sustainability and planetary health among local residents. This approach could create opportunities for impactful outreach activities within the broader community.</li> </ul>	
Support for Student-Led Initiatives	C
<ul style="list-style-type: none"> <li>While the School of Medicine at the University of Minho doesn't offer explicit student support programs focused on planetary health, students have opportunities to engage with related topics. During their studies, students can select three projects that may address themes relevant to health and sustainability. Furthermore, the University of Minho's Medical Students' Association (NEMUM) includes among its goals the promotion of sustainability awareness in everyday life. These indirect avenues allow students to explore and contribute</li> </ul>	

to planetary health concepts within their medical education.

- **Recommendations:** The School of Medicine might explore developing a dedicated online platform focused on planetary health. This website could serve to enhance students' understanding and awareness of opportunities within this emerging field, promoting greater engagement with the subject.

## Campus Sustainability

C-

- The University of Minho's School of Medicine has taken significant strides towards campus sustainability, implementing various eco-friendly initiatives. These include enhanced recycling programs, introducing more plant-based meal options, and efforts to minimize plastic usage. While the University of Minho, encompassing the medical school, aspires to achieve carbon neutrality, they have yet to develop a comprehensive strategy detailing the specific steps to reach this ambitious goal.
- **Recommendations:** The University of Minho ought to place greater emphasis on incorporating eco-friendly, health-conscious materials in its construction projects, while simultaneously expanding its utilization of renewable energy sources. Additionally, the institution could consider retrofitting existing buildings with energy-efficient systems.

## 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***

<b>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?</b>	
Yes, the medical school has offered <b>more than one</b> elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered <b>one</b> elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does <b>not</b> have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a <b>lecture</b> on planetary health. (1 points)	
No, the medical school has <b>not</b> offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	2
<b>Score explanation:</b> At the School of Medicine of the University of Minho, 2nd-year students, in the PCM (Complementary Pathways in Medicine) curriculum, can choose a module on "Food and Gastronomy" which addresses topics such as vegetarian and plant-based diets or a module on "Climate Change and Health" which aims to empower students with knowledge essential information on the impacts of climate change on human health.  Additionally, in the 1st year, in the IFM (Introduction to Medical Training) curriculum, there is a class on "Safety and Laboratory Techniques", which discusses the need for sustainability and resource management in laboratory classes, as well as the duty of proper waste separation. In the Academic Profile 1 curriculum, there is a class on "Healthy Lifestyles and Well-being: Nutrition", addressing the need for healthy and sustainable eating.  Lastly, in the PCPA5 (Clinical Practice and Academic Profile 5) curriculum, in the "Intensive Course: Preventive Care - Primordial Prevention", the issue of pollution is addressed and "International Health / Traveler's Consultation / REVIVE", issues of planetary health.  The Students' Medicine Nucleus of the University of Minho (NEMUM), in collaboration with the <i>Society-</i> Student Association for Sustainability at the University of Minho, during the 2024 term, as	

part of the “ECOVIDA” activity, carried out one activity about healthy food and a social media post about impact of climate change on health. For the 2025 term, they plan to conduct the “ECOVIDA” activity to raise awareness about the importance of sustainability in everyday life, with 2 workshops and a sustainability fair.

***Curriculum: Health Effects of Climate Change***

**1.2. Does your medical school 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:

1

*Score explanation:* At the School of Medicine of the University of Minho, 2nd-year students, in the PCM (Complementary Pathways in Medicine) curriculum, can choose a module “Climate Change and Health” which aims to empower students with knowledge essential information on the impacts of climate change on human health including the direct health effects of heat waves.

**1.3. Does your medical school 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:

1

*Score explanation:* At the School of Medicine of the University of Minho, 2nd-year students, in the PCM (Complementary Pathways in Medicine) curriculum, can choose a module “Climate Change and Health” which aims to empower students with knowledge essential information on the impacts of climate change on human health including the direct health effects of extreme weather events (like storms and floods) on individual health.



**1.4. Does your medical school 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

*Score explanation:* The School of Medicine at the University of Minho does not offer dedicated courses specifically addressing the relationship between climate change and shifting infectious disease patterns. Nevertheless, several classes touch upon related subjects, indirectly linking to this issue. In the first year, the PA1 (Academic Profile 1) curriculum offers "History of Infectious Diseases: Ethical Decisions in Clinical Practice" and "History of Epidemiology". The FM2 (Fundamentals of Medicine 2) curriculum includes sessions on "Multidrug-resistant Pathogens" and "Emerging Diseases and Zoonoses." The IPM (Introduction to Medical Practice) course covers "Traveler's Diseases" and "Zoonoses." Additionally, the PCPA5 (Clinical Practice and Academic Profile 5) curriculum features a class on "Disease Outbreak - Human Consumption Water / Wastewater." These topics are presented as evolving challenges influenced by climate change, although the connection is not explicitly emphasized. The PCM (Complementary Pathways in Medicine) curriculum, in the "Climate Change and Health" module, addresses vector-borne diseases (such as dengue and malaria).

**1.5. Does your medical school 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

*Score explanation:* The University of Minho's School of Medicine incorporates discussions on environmental factors affecting respiratory health in its curriculum. Specifically, the IPM (Introduction to Medical Practice) program features a session dedicated to Chronic Obstructive Pulmonary Disease (COPD), which explores the role of pollution as a contributing factor to this condition. Additionally, in PCM (Complementary Pathways in Medicine) curriculum, in the

“Climate Change and Health” and the PCPA5 (Clinical Practice and Academic Profile 5) curriculum includes an "Intensive Course: Preventive Care - Primordial Prevention" that addresses the impact of pollution and toxic substance exposure on disease development. These courses highlight the importance of environmental considerations in understanding and preventing certain health conditions.

**1.6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat**

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

*Score explanation:* At the School of Medicine of the University of Minho, during the PACPA1 (Clinical Practice and Academic Profile 1) curriculum, there is a class on "Cardiovascular Risk", which addresses that air pollution is a risk factor for cardiovascular disease, representing 2% in Portugal and 4% in Europe.

**1.7. Does your medical school 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:

1

*Score explanation:* At the School of Medicine of the University of Minho, 2nd year students, in the PCM curriculum (Complementary Pathways in Medicine), can opt for a module “Climate Change and Health” that addresses the psychological and mental health impacts of climate change.

**1.8. Does your medical school 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:

2

*Score explanation:* The University of Minho's School of Medicine integrates nutrition and environmental health education throughout its curriculum. First-year students in the PA1 (Academic Profile 1) program attend a course on "Healthy Lifestyles and Well-being: Nutrition," introducing fundamental concepts. In the second year, the PCM (Complementary Pathways in Medicine) curriculum offers courses on "Food and Gastronomy" and "Planetary Health - Climate Change and Health," expanding students' knowledge on these interconnected topics. As students progress to their clinical years, the PCPA5 (Clinical Practice and Academic Profile 5) program includes classes such as "Disease Outbreak - Food Safety" and "Disease Outbreak - Human Consumption Water / Wastewater," which delve deeper into the relationship between environmental factors and public health. This comprehensive approach ensures students receive a well-rounded education on nutrition, environmental health, and their impacts on human wellbeing throughout their medical training.

**1.9. Does your medical school 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:

1

*Score explanation:* The University of Minho's School of Medicine offers second-year students an elective "Humanitarian Medicine" module within the PCM (Complementary Pathways in Medicine) curriculum. Although this course doesn't explicitly focus on climate change, it aims to help students recognize both infectious and non-infectious health challenges that are more common in underprivileged regions facing resource constraints, limited health information access, and social marginalization. As part of the evaluation process, students have the opportunity to design and propose a community-based intervention project, applying their knowledge to real-world scenarios.

**1.10. Does your medical school 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

*Score explanation:* The University of Minho's School of Medicine offers second-year students an elective "Humanitarian Medicine" module within the PCM (Complementary Pathways in Medicine) curriculum. Although this course doesn't explicitly focus on climate change, it aims to help students recognize both infectious and non-infectious health challenges that are more common in underprivileged regions facing resource constraints, limited health information access, and social marginalization. As part of the evaluation process, students have the opportunity to design and propose a community-based intervention project, applying their knowledge to real-world scenarios.

***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:* At the School of Medicine of the University of Minho, there are no classes that address this topic.

**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 <b>briefly</b> covered in the <b>core</b> curriculum.	
This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho, there are no classes that address this topic.	

<b>1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum.	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum.	
This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho, there are no classes that address this topic.	

<b>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?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum.	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum.	
This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	1

*Score explanation:* The University of Minho's School of Medicine offers second-year students an elective "Humanitarian Medicine" module within the PCM (Complementary Pathways in Medicine) curriculum. Although this course doesn't explicitly focus on climate change, it aims to help students recognize both infectious and non-infectious health challenges that are more common in underprivileged regions facing resource constraints, limited health information access, and social marginalization. As part of the evaluation process, students have the opportunity to design and propose a community-based intervention project, applying their knowledge to real-world scenarios.

### *Curriculum: Sustainability*

#### **1.15. Does your medical school 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

*Score explanation:* The University of Minho's School of Medicine integrates nutrition education throughout its curriculum. First-year students in the PA1 (Academic Profile 1) program attend a session titled "Healthy Lifestyles and Well-being: Nutrition," introducing fundamental concepts. In the second year, the PCM (Complementary Pathways in Medicine) curriculum offers a course on "Food and Gastronomy," and " Planetary Health - Climate Change and Health, expanding students' culinary knowledge. As students progress to their clinical years, the PCPA5 (Clinical Practice and Academic Profile 5) program includes an "Intensive Course: Preventive Care - Health and Nutrition," which delves deeper into dietary approaches for disease prevention and management. This comprehensive approach ensures students receive a well-rounded education on nutrition's role in healthcare throughout their medical training.

Furthermore, the Students' Medicine Nucleus of the University of Minho (NEMUM), during the 2024 term, conducted an activity called ECOVIDA (Ecolife) with the aim of raising awareness about climate change's health impacts. The initiative included an informative post about climate change and health, alongside a workshop on preparing healthy packed lunches, emphasizing the connection between personal health and environmental sustainability.

#### **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 <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho, there are no classes that address this topic.	

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	Score
The health <b>and</b> environmental <b>co-benefits</b> of <b>avoiding</b> over-medicalisation, over-investigation and/or over-treatment (2 points)	2
The environmental impact of <b>pharmaceuticals</b> and over-prescribing as a cause of climate health harm. Alternatively teaching on <b>deprescribing</b> where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	2
The health <b>and</b> environmental <b>co-benefits</b> of <b>non-pharmaceutical management</b> 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 <b>surgical</b> healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	0
The impact of <b>anaesthetic</b> 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)	0
The impact of <b>inhalers</b> on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	0
<b>Waste production</b> within healthcare <b>clinics</b> and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	1
<i>Score explanation:</i> <ol style="list-style-type: none"> <li>At the School of Medicine of the University of Minho, during the 1st year in the FM2 (Fundamentals of Medicine 2) curriculum, there is a class on "Rational Prescription of Antibiotics in Primary Health Care" that emphasizes judicious antimicrobial use. In the 2nd year, within the PCM (Complementary Pathways in Medicine) curriculum, students can select a course on "General Principles of Antibiotic Therapy" addressing appropriate therapeutic management. During the theoretical years, Case-Based Learning (CBL) sessions present clinical scenarios where students explore comprehensive medical topics including anatomy, physiology, and therapeutics, concentrating on prevention, primary</li> </ol>	

treatment through lifestyle modifications, and targeted therapeutic interventions when required. Throughout clinical years, hospital internship tutors further explain the critical importance of responsible antibiotic prescription and management.

2. The University of Minho's School of Medicine integrates comprehensive antibiotic education into its curriculum. First-year students in the FM2 (Fundamentals of Medicine 2) program attend a session on "Rational Prescription of Antibiotics in Primary Health Care," emphasizing judicious antimicrobial use. This course highlights the importance of prescribing antibiotics only when necessary and with careful consideration. Another class, "Multidrug-Resistant Pathogens," explores the connection between improper antibiotic use and the development of resistant microorganisms. Throughout the program, both Case-Based Learning (CBL) exercises and clinical rotations in hospitals address the effects of medications and the complex decision-making process involved in weighing their risks and benefits. This multifaceted approach ensures students gain a comprehensive understanding of responsible antibiotic use and its broader implications for public health.
3. Throughout Case-Based Learning (CBL) sessions and hospital rotations, medical students are instructed on the importance of promoting lifestyle modifications to manage various health conditions. This approach is further reinforced in the second year, specifically within the FM3 (Fundamentals of Medicine 3) curriculum. During the "Anti-dyslipidemic" lecture, students learn about non-pharmacological interventions for managing lipid disorders. For instance, they are taught that engaging in regular physical activity is the most effective method for elevating HDL cholesterol levels, emphasizing the crucial role of lifestyle changes in disease management and prevention.
7. The University of Minho's School of Medicine integrates environmental responsibility into its curriculum from the first year. Within the IFM (Introduction to Medical Training) program, students attend a "Safety and Laboratory Techniques" course that emphasizes sustainable practices and efficient resource utilization in laboratory settings. This class also stresses the importance of appropriate waste segregation. As students progress to their clinical years, they receive instruction on hospital waste management protocols, ensuring they understand the significance of proper disposal practices in healthcare settings. This comprehensive approach aims to instill a sense of environmental stewardship and professional responsibility in future medical practitioners throughout their education.

### *Curriculum: Clinical Applications*

**1.18. In training for patient encounters, does your medical school's 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:

0

*Score explanation: At the School of Medicine of the University of Minho, there are no classes that address this topic.*



**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:

2

*Score explanation:* The University of Minho's School of Medicine incorporates comprehensive medical history-taking skills into its clinical curriculum. During the later years of study, students are instructed on gathering detailed patient information, including potential exposure to environmental toxins and access to potable water. This approach is formally introduced in the IPM (Introduction to Medical Practice) program, specifically within the "The Art of Interview 1" course. Here, students are taught techniques for conducting thorough patient interviews, emphasizing the importance of collecting a complete medical history that encompasses both personal health factors and potential environmental influences.

### ***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:

2

*Score explanation:* The School of Medicine of the University of Minho has processes in place to implement or improve education on sustainable health and global health. This means that the introduction of optional subjects in the PCM (Complementary Pathways in Medicine) on 'Planetary Health - Climate Change and Health'.

**1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?**

Planetary health/ESH topics are <b>well integrated</b> 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 <b>(a) standalone lecture(s)</b> . (2 points)	
There is <b>minimal/no</b> education for sustainable healthcare. (0 points)	
Score Assigned:	4
<p><i>Score explanation:</i> At the School of Medicine of the University of Minho, there is an optional course dedicated to planetary health, "Planetary Health - Climate Change and Health" in the PCM (Complementary Pathways in Medicine) curriculum. However, in some classes in the regular curriculum, the consequences of climate change are presented as risk factors for certain diseases, and sustainability and waste separation measures are implemented during laboratory sessions. The subject "Safety and Laboratory Techniques" of the IFM (Introduction to Medical Practice) 1st year curriculum is an example of a subject that addresses the importance of adequate waste separation and sustainability.</p>	

<b>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?</b>	
Yes, the <b>medical school</b> has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the <b>medical school</b> does <b>not</b> have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	0
<p><i>Score explanation:</i> At the School of Medicine of the University of Minho, there is no faculty member responsible for addressing planetary health in the curriculum.</p>	

<b>Section Total (31 out of 72)</b>	<b>43.06%</b>
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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.

<b>2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>institution</u>?</b>	
Yes, there are faculty members at the <b>institution</b> who have a <b>primary</b> research focus in planetary health <b>or</b> sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the <b>institution</b> who are conducting research <b>related</b> to planetary health or healthcare sustainability, <b>OR</b> 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 <b>institution</b> , but not specifically associated with healthcare/vetcare. (1 point)	
No, there are <b>no</b> planetary health and/or sustainability researchers at the <b>institution</b> at this time. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i> At the School of Medicine of the University of Minho, there are neither ongoing research projects nor researchers engaged in planetary health and healthcare sustainability. The University of Minho integrates sustainability and environmental health into several of its research units. The Institute of Science and Innovation for Bio-Sustainability (IB-S) is an example of a unit that promotes interdisciplinarity in research related to environmental sustainability.</p>	

<b>2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>?</b>	
There is <b>at least one</b> dedicated department or institute for interdisciplinary planetary health research. (3 points)	
There is <b>not currently</b> a department or institute for interdisciplinary planetary health research, but there are <b>plans</b> to open one in the next 3 years. (2 points)	
There is an <b>Occupational and Environmental Health department</b> , but no interdisciplinary department or institute for planetary health research. (1 points)	

There is <b>no</b> dedicated department or institute. (0 points)	
Score Assigned:	3
<i>Score explanation:</i> At the School of Sciences of the University of Minho, in the Biology Department, at the Center for Molecular and Environmental Biology (CBMA), research is being conducted in the field of ecosystems and climate change. Furthermore, the Institute of Science and Innovation for Bio-Sustainability (IB-S) is an example of a unit that promotes interdisciplinarity in research related to environmental sustainability.	

<b>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 <u>institution</u>?</b>	
Yes, there is a process in which community members impacted by climate and environmental injustice have <b>decision-making power</b> in the climate + environmental research agenda. (3 points)	
Yes, there is a process in which community members impacted by climate and environmental injustice <b>advise</b> the climate + environmental research agenda. (2 points)	
<b>No</b> , but there are <b>current efforts</b> to establish a process for community members to advise or make decisions on the research agenda. (1 points)	
There is <b>no</b> process, and <b>no</b> efforts to create such a process. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho, there is no process.	

<b>2.4. Does your <u>institution</u> have a planetary health website that centralises ongoing and past research related to health and the environment?</b>	
There is an <b>easy-to-use, adequately comprehensive</b> website that <b>centralises</b> 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 <b>attempts to centralise</b> various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)	
The <b>institution</b> has an <b>Office of Sustainability website</b> that includes <b>some</b> resources related to health and the environment. (1 point)	
There is <b>no</b> website. (0 points)	

Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho, there is no such website.	

<b>2.5. Has your <u>institution</u> recently hosted a conference or symposium on topics related to planetary health?</b>	
Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)	
Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)	
Yes, the <b>institution</b> has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)	
The <b>institution</b> has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)	
No, the <b>institution</b> has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> In September 2024, the first Greenfest was held at University of Minho, which included the participation of the Schools of University, companies, city hall and citizens, aiming to raise awareness about sustainability issues. In addition, some teachers and researchers, especially from School of Medicine, Sciences, Psychology, Education and Nursing, have participated in conferences, round tables rounds and have been invited to participate in public sessions, where the central theme is the relationship between health and environment.	

<b>2.6. Is your <u>institution</u> a member of a national or international planetary health or ESH/ESV organisation?</b>	
Yes, the institution is a member of a national or international planetary health <b>or</b> ESH/ESV organisation. (1 points)	
No, the institution is <b>not</b> a member of such an organisation. (0 points)	
Score Assigned:	0

*Score explanation:* At the School of Medicine of the University of Minho, there are no members belonging to a planetary health organization.

**Section Total (6 out of 17)**

**35.29%**

## 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 **institution** 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:

3

*Score explanation:* At the School of Medicine of the University of Minho, both the Students' Medicine Nucleus of the University of Minho (NEMUM), the Association of Volunteering of University Medicine Students of Porta Nova and Society Loving the Planet Minho have among their actions the promotion of environmental health awareness.

The University of Minho works with partner entities to promote sustainability, such as the Laboratory da Paisagem and other networks such as SDSN Portugal and the Sustainable Campus Network.

Furthermore, the Students' Medicine Nucleus of the University of Minho (NEMUM), during the 2024 term, conducted an activity called ECOVIDA (Ecolife) with the aim of raising awareness about climate change's health impacts. The initiative included an informative post about climate change and health, alongside a workshop on preparing healthy packed lunches, emphasizing the connection between personal health and environmental sustainability.

### 3.2. Does your **institution** 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 <b>institution</b> 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 <b>institution</b> has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)	
The <b>institution/medical school</b> have not offered such community-facing courses or events. (0 points)	
Score Assigned:	1
<i>Score explanation:</i> The University of Minho promotes events open to the community that address relevant topics within the scope of sustainability and environmental health. These initiatives can be organized by different Schools and Institutes and service units of the institution, reinforcing the institution's commitment to involving the society on issues crucial to sustainable development.	

<b>3.3. Does your <u>institution</u> have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?</b>	
Yes, all students <b>regularly</b> 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 <b>some courses</b> . (1 point)	
Students <b>do not</b> receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho, students do not receive communications about planetary health or sustainable healthcare.	

<b>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?</b>	
Yes, the <b>institution</b> or <b>main affiliated hospital trust</b> 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 <b>institution</b> or <b>main affiliated hospital trust</b> offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)	



There are <b>no</b> such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho and in the affiliated hospitals, there are no courses on planetary health that are known to postgraduate doctors.	

<b>3.5. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?</b>	
Yes, the <b>medical school</b> or <b><u>all</u> affiliated hospitals</b> have accessible educational materials for patients. (2 points)	
<b>Some</b> affiliated hospitals have accessible educational materials for patients. (1 point)	
<b>No</b> affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho and in the affiliated hospitals, there are no educational materials on environmental health exposures for patients.	

<b>3.6. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?</b>	
Yes, the <b>medical school</b> or <b><u>all</u> affiliated hospitals</b> have accessible educational materials for patients. (2 points)	
<b>Some</b> affiliated hospitals have accessible educational materials for patients. (1 point)	
<b>No</b> affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho and in the affiliated hospitals, there are no educational materials about the health impacts of climate change for patients.	

<b>Section Total (4 out of 14)</b>	<b>28.57%</b>
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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 **institution** offer support for students interested in enacting a sustainability initiative/QI project?

Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* 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

*Score explanation:* At the University of Minho's School of Medicine, students can personalize their education by selecting a Major, two Minors, or three Projects. Under tutorial guidance, they develop health-related projects with academic flexibility. While no predefined track exists, students can independently explore such research interests.

## 4.2. Does your **institution** 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

*Score explanation:* At the University of Minho's School of Medicine, students can personalize their education by selecting a Major, two Minors, or three Projects. Under tutorial guidance, they develop health-related projects with academic flexibility. While no predefined planetary health track exists, students can independently explore such research interests.

**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:

0

*Score explanation:* At the School of Medicine of the University of Minho, there is no medical-school specific webpage for planetary health.

**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:

2

*Score explanation:* At the School of Medicine of the University of Minho, there is NEMUM (Students' Medicine Nucleus of the University of Minho), which, among its general objectives, has the exploration of themes related to Ecology and Environmental Health, with an emphasis on the

current crises we face. The Students' Medicine Nucleus of the University of Minho (NEMUM), in collaboration with the *Society*- Student Association for Sustainability at the University of Minho, during the 2024 term, as part of the “ECOVIDA” activity, carried out one activity about healthy food and a social media post about impact of climate change on health. For the 2025 term, they plan to conduct the “ECOVIDA” activity to raise awareness about the importance of sustainability in everyday life, with 2 workshops and a sustainability fair.

**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:

1

*Score explanation:* The University of Minho’s School of Medicine has a Collegiate Body (CE), which comprises representatives from faculty, researchers, students, and administrative staff. This inclusive governance structure ensures comprehensive institutional management and strategic coordination, with student representation being a fundamental component of the decision-making process.

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.	0
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1

*Score explanation:*

2. At the School of Medicine of the University of Minho, there is the NEMUM (Núcleo de Estudantes de Medicina da Universidade do Minho), which has among its general objectives the exploration of themes related to Ecology and Environmental Health, with an emphasis on the current crises that face. In fact, during the 2024 semester, NEMUM carried out, in collaboration with the Society-Association of Students for Sustainability of the University of Minho, an ECOVIDA activity, carried out an activity on healthy eating and a publication on social networks about the impact of climate change on health. For the 2025 term, NEMUM plans to organize the ECOVIDA activity to raise awareness among the population about the importance of sustainability in everyday life.

6. In 2024, NEMUM organized the "Vital Walk and Run" initiative and the University of Minho organized Greenfest.

**Section Total (7 out of 15)**

**46,67%**

# 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 <b>at least one designated staff member</b> 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 <b>no specific staff member</b> in charge of hospital sustainability. (2 points)	
There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee. (1 point)	
There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> At the University of Minho, there is a Pro-Rector responsible for Sustainable Development and Campus Planning, who works in the Office of Quality, Safety, Health, Environment and Sustainability.	

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

*Score explanation:* In 2016, at the Conference of the Parties of the United Nations Framework Convention on Climate Change, Portugal committed to achieving carbon neutrality by 2050. Currently, projects such as the installation of photovoltaic panels are underway, aimed at increasing the production of renewable energy, and the creation of charging stations for electric vehicles, promoting sustainable mobility. Although a specific year has not yet been established to achieve carbon neutrality, the university recognizes that this goal requires an effort significant, including the implementation of effective strategies to offset unavoidable emissions. However, the two cities where it is located aim to achieve carbon neutrality by a date prior to the targets defined by the European Union.

**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:

0

*Score explanation:* The School of Medicine at the University of Minho does not utilize renewable energy sources. University of Minho makes commitment active with sustainability in its administrative operations, including the efficient and responsible management of resources. Although the specific acquisition criteria are not publicly detailed, the institution adopts practices that ensure the balanced use of available resources, contributing to the preservation of natural environment. As a public entity, UMinho is subject to compliance with national guidelines, ensuring compliance with current regulations. In this context, the publication on 25th stands out: October 2023, of Council of Ministers Resolution No. 132/2023, which establishes guiding principles fundamental for promoting sustainability in the public sector (share of electricity supplied through renewable energy sources of at least 25%). The university is committed to aligning its practices with the principles defined in this resolution, reinforcing its role as an institution exemplary in the adoption of sustainable policies and environmental responsibility.

**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 <b>not been retrofitted</b> . (2 points)	
Sustainable building practices are <b>inadequately or incompletely</b> implemented for new buildings. (1 point)	
Sustainability is <b>not considered</b> in the construction of new buildings. (0 points)	
Score Assigned:	3
<i>Score explanation:</i> The University of Minho follows the guidelines of the publication, on 25th October 2023, of Council of Ministers Resolution No. 132/2023, which establishes guiding principles fundamental for promoting sustainability in the public sector.	

<b>5.5. Has the <u>institution</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?</b>	
Yes, the institution has implemented strategies to encourage and provide <b>environmentally-friendly transportation options</b> 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 <b>some</b> strategies to provide environmentally-friendly transportation options, but the options are <b>unsatisfactorily</b> accessible or advertised. (1 point)	
The institution has <b>not</b> implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	1
<i>Score explanation:</i> The provision of buses that ensure the connection between the camps of Braga and Guimarães, a measure developed in partnership with the Students' Association, which facilitates the displacement of the academic community and reduces the use of individual transport, contributing to the reduction of carbon emissions. Additionally, UMinho has created infrastructures that promote use of bicycles as an alternative and sustainable means of transport, namely through provision of appropriate locations for the safe parking of these vehicles on their campuses.	

<b>5.6. Does your <u>institution</u> have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?</b>	
Yes, the institution has <b>both</b> compost <b>and</b> recycling programs accessible to students and faculty. (2 points)	



The institution has <b>either</b> recycling <b>or</b> compost programs accessible to students and faculty, but not both. (1 point)	
There is <b>no</b> compost or recycling program at the medical school. (0 points)	
Score Assigned:	1
<i>Score explanation:</i> At the School of Medicine of the University of Minho, there are some recycling stations, including at the head office of the Students' Medicine Nucleus of the University of Minho (NEMUM).	

<b>5.7. Does the <u>institution</u> apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?</b>	
Yes, the institution has <b>adequate</b> sustainability requirements for food and beverages, including meat-free days or no red-meat, and <b>is engaged</b> in efforts to increase food and beverage sustainability. (3 points)	
There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The institution <b>is engaged</b> in efforts to increase food and beverage sustainability. (2 points)	
There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The institution is <b>not</b> engaged in efforts to increase food and beverage sustainability. (1 point)	
There are <b>no</b> sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	3
<i>Score explanation:</i> At the University of Minho's Medical School, students enjoy vegetarian meal options in the canteen and bar, featuring fresh salads, fruits, and plant-based dishes. The campus also demonstrates environmental consciousness by exclusively using paper cups at coffee machines, reducing plastic waste.	

<b>5.8. Does the <u>institution</u> apply sustainability criteria when making decisions about supply procurement?</b>	
Yes, the institution has <b>adequate</b> sustainability requirements for supply procurement <b>and</b> is <b>engaged</b> in efforts to increase sustainability of procurement. (3 points)	
There are sustainability guidelines for supply procurement, but they are <b>insufficient or optional</b> . The institution is <b>engaged</b> in efforts to increase sustainability of procurement. (2 points)	
There are sustainability guidelines for supply procurement, but they are <b>insufficient or optional</b> . The institution is <b>not engaged</b> in efforts to increase sustainability of procurement. (1 point)	

There are <b>no</b> sustainability guidelines for supply procurement. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho, there are no sustainability guidelines for supply procurement.	

<b>5.9. Are there sustainability requirements or guidelines for events hosted at the institution?</b>	
Every event hosted at the institution <b>must</b> abide by sustainability criteria. (2 points)	
The institution <b>strongly recommends or incentivizes</b> sustainability measures, but they are <b>not required</b> . (1 point)	
There are <b>no</b> sustainability guidelines for institution events. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> The University of Minho is committed to sustainability in its operations, including the organization of events. Although no public guidelines for events are specified, the university regularly publicizes its performance in the environmental, social, economic and cultural dimensions, following the best international practices.	

<b>5.10. Does your <u>institution</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?</b>	
Yes, the institution has <b>programs</b> and <b>initiatives</b> to assist with making lab spaces more environmentally sustainable. (2 points)	
There are <b>guidelines</b> on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are <b>no</b> efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> At the School of Medicine of the University of Minho, there are no efforts at the medical school to make lab spaces more sustainable.	

**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:

3

*Score explanation:* In Portugal, there is no funding from fossil fuel companies in universities. The University of Minho is a public higher education institution and has no shareholder investors. Your financing comes mainly from public funds, tuition fees and research projects.

**Section Total (14 out of 32)**

**43.75%**

# 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%

*\*Within each grade bracket, a score in the top 5% (\_5 to \_9%), receives a “+”, and a score in the bottom 5% (\_0- \_4%) receives a “--”. For example, a percentage score of 78% would be a B+.*

## Planetary Health Grades for the School of Medicine of the University of Minho

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

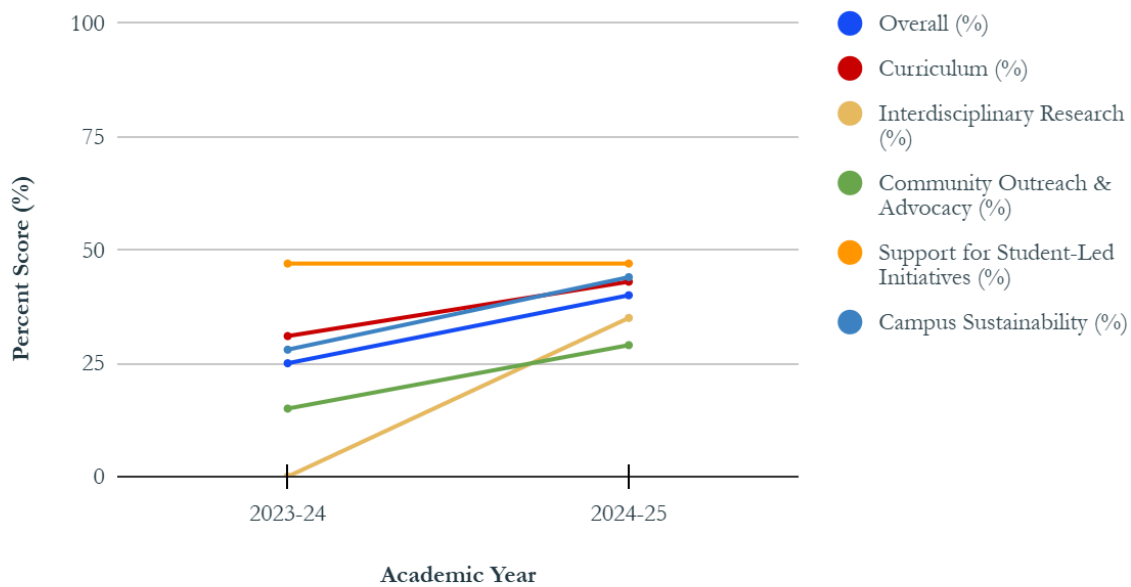
Section	Raw Score %	Letter Grade
<b>Planetary Health Curriculum (30%)</b>	$(31/72) \times 100 = 43.06\%$	C-
<b>Interdisciplinary Research (17.5%)</b>	$(6/17) \times 100 = 35.29\%$	D+
<b>Community Outreach and Advocacy (17.5%)</b>	$(4/14) \times 100 = 28.57\%$	D
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	$(7/15) \times 100 = 46.67\%$	C
<b>Campus Sustainability (17.5%)</b>	$(14/32) \times 100 = 43.75\%$	C-
<b>Institutional Grade</b>	$(43.06 \times 0.3 + 35.29 \times 0.175 + 28.57 \times 0.175 + 46.67 \times 0.175 + 43.75 \times 0.175) = 40.00\%$	C-

## Report Card Trends

## Section Overview

This graph demonstrates trends in overall and section grades for the years in which the School of Medicine of the University of Minho has participated in the Planetary Health Report Card initiative.

### Planetary Health Report Card Trends for School of Medicine of the University of Minho



### Planetary Health Report Card Trends for School of Medicine of the University of Minho

