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# Planetary Health Report Card (Medicine): *Université de Lausanne*

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**UNIL** | Université de Lausanne

2023-2024 Contributing Team:

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## Summary of Findings

Overall	C+
<u>Curriculum</u>	B-
<ul style="list-style-type: none"> <li>The Medical Faculty (MFac) of University of Lausanne introduces planetary health (PH) concepts in its core and optional curriculum. However, there is a limited amount of time devoted to the topic, with the same few lectures repeatedly cited throughout the report card and brief mentions in other core curriculum lectures. PH is best explored in one dedicated elective course available for 3<sup>rd</sup> year students. The faculty intends to make major improvements to the curriculum with efforts undertaken by the <i>platform for health and sustainability</i> launched in 2022. Furthermore, the faculty added new PH related lessons in the main curriculum in 2023.</li> <li><b>Recommendations:</b> Insufficiently incorporated topics include the outsized impact of climate change on marginalised populations. The 3<sup>rd</sup> year elective course could be made available to other year groups and other health care students (to foster interprofessional exchanges on PH) or be adapted into a one week summer/winter school.</li> </ul>	
<u>Interdisciplinary Research</u>	B
<ul style="list-style-type: none"> <li>The MFac has held a few conferences/symposiums on planetary health, mainly directed towards health professionals and researchers. Research is being conducted on PH.</li> <li><b>Recommendations:</b> More funding could go into PH research, notably by creating a dedicated department or institute. Further PH research opportunities could be offered by tutors to medical students at the master and doctoral level, ranging from public health to clinical research. We encourage the development of panels and speaker series, by expanding the intended audience to medical students and the wider university community.</li> </ul>	
<u>Community Outreach and Advocacy</u>	F
<ul style="list-style-type: none"> <li>The University of Lausanne has little community outreach relating to PH. The CHUV does not have accessible educational material for patients on environment and health.</li> <li><b>Recommendations:</b> Community partnerships with social, cultural, and sports organizations could be developed to address planetary health, providing the public with accessible and informative resources in the form of pamphlets, courses, and workshops (e.g., cooking skills, exercise plan, lifestyle choices, etc.). Community-level immersion programs for medical students could be developed.</li> </ul>	
<u>Support for Student-Led Initiatives</u>	B-
<ul style="list-style-type: none"> <li>The <i>platform for health and sustainability</i> collaborates with <i>Health for Future Lausanne</i>, a student-led association dedicated to health and sustainability which receives funding from the <i>Lausanne medical students' association</i>.</li> <li><b>Recommendations:</b> The school could create a formal student liaison position representing sustainability interests, serving on the medical school's decision-making council.</li> </ul>	
<u>Campus Sustainability</u>	B
<ul style="list-style-type: none"> <li>The University of Lausanne as a whole has made substantial progress in sustainability and in communicating its goals, notably with the creation of the <i>Assembly of Transition</i>. Still, improvements are to be made by the MFac itself (which is mostly spread throughout multiple sites that are separate from the main university campus), specifically in identifying its own carbon emissions contributions and how to reduce them.</li> <li><b>Recommendations:</b> Sustainability guidelines should be drawn up for supply procurement and events hosted at the medical school.</li> </ul>	

# 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 medical schools, we have created a Planetary Health Report Card that medical students internationally can use to grade and compare their home institutions on an annual basis. This medical-student-driven initiative aims to compare medical 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 vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School 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. 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 providers 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.
- **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.
- **Clerkship:** 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 or placements.

**Other considerations:**

- If there are more than one "tracks" at your medical school 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).

**Added to our resources in 2022, the Planetary Health Report Card [Literature Review by Metric](#) collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a 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?	
3	Yes, the medical school has offered <b>more than one</b> elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered <b>one</b> elective whose primary focus is ESH/planetary health in the past year.
1	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.
0	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.
<p><i>Score explanation:</i> During the 2023-2024 academic year, the MFac offered an elective course related to PH, jointly organised by the Medical Faculty of Geneva, and available for 3rd year students only. An additional 3rd year elective class was introduced this year, open as well to nursing students, which largely explored the impact of pollution on health. The learning objectives can be found at: <a href="https://www.unil.ch/ecoledemedecine/cours-option-bmed3">https://www.unil.ch/ecoledemedecine/cours-option-bmed3</a></p> <p><i>Course title:</i> “De la santé planétaire à la pratique clinique” (“From planetary health to clinical practice”), “Effet boomerang des activités humaines sur la Terre : Impact des pollutions sur la santé” (“The boomerang effect of human activities on the Earth: Impact of pollution on health”)</p>	

## 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?	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: As part of the module M2.5 for second year Masters students, there was one 45-minute lecture dedicated to climate change, including the relationship between the increased incidence of heatwaves and increased mortality in Switzerland, and the presentation of one clinical case of heat stroke.*

*Course title “Maladies chroniques à l’ère du réchauffement climatique et co-bénéfices santé/environnement” (“Chronic diseases in the era of global warming and health/environment co-benefits”)*

*This topic is further explored throughout the elective course “De la santé planétaire à la pratique clinique” (“From planetary health to clinical practice”) given to 3rd year students in a 45-minute course that covers the major health impacts of climate change.*

*Course title: “Impact du changement climatique sur la santé” (“Impact of climate change on health”).*

*The topic was also addressed in a 45 min. period called “Crise climatique et équité en santé: Le défi du XXIème siècle?” (“Climate Crisis and Health Equity: The Challenge of the 21st Century?”) which was part of the elective course offered to 3rd and 4th year students “Équité des soins, équité en santé : des patient·e·s, des pathologies, des défis de santé publique” (“Equity of care, equity in health: patients, diseases, public health challenges”).*

### **1.3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation:*

*In the 2.3 module for 2nd year Masters students, some slides in a 45 minute lecture discuss hurricanes and rising sea levels.*

*Course title: “Santé globale: De quelles maladies transmissibles souffriront les populations d’ici et d’ailleurs dans un futur proche” (“Global health: Which communicable diseases will affect populations here and abroad in the near future?”).*

*This topic is further explored throughout the elective course “De la santé planétaire à la pratique clinique” (“From planetary health to clinical practice”) given to 3rd year students in a 45-minute course that covers the major health impacts of climate change named “Impact du changement climatique sur la santé” (“Impact of climate change on health”).*

*In a 45 min period called “Crise climatique et équité en santé: Le défi du XXIème siècle?” (“Climate Crisis and Health Equity: The Challenge of the 21st Century?”) as part of the elective course offered to 3rd and 4th year students “Équité des soins, équité en santé : des patient·e·s, des pathologies, des défis de santé publique” (“Equity of care, equity in health: patients, diseases, public health challenges”), the impact of extreme weather changes on individual health is mentioned.*

### **1.4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: In the third year of Bachelor, as part of the 3.3 module on blood, immunity and infection there is a 45-minute lecture dedicated to emerging viruses, covering the climate-related factors that contribute to the expansion of zoonotic diseases.  
Course title: “Virus émergents et zoonotiques” (“Emerging and zoonotic virus”).*

*In the 2.3 module for 2nd year masters students, some slides discuss the link between increased flooding (due to climate change) and cholera and leptospirosis. The impact of increased temperature on vector-borne diseases (such as malaria, dengue and chikungunya) is also discussed.  
Course title: “Santé globale: De quelles maladies transmissibles souffriront les populations d’ici et d’ailleurs dans un futur proche?”. (“Global health: Which communicable diseases will affect populations here and abroad in the near future?”).*

*In a 45 min period called “Crise climatique et équité en santé: Le défi du XXIème siècle?” (“Climate Crisis and Health Equity: The Challenge of the 21st Century?”) part of the elective course on health equity offered to 3rd and 4th year students, the impact of extreme weather changes on individual health is mentioned.*

<b>1.5. Does your <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?</b>	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: As part of the 1.7 module for students in the first year of Masters, there was one 45-minute lecture dedicated to air, water and soil pollution. Course title: “Santé environnementale: Pollutions air/eau/sol” (“Environmental health: air/water/ground pollution”).*

*As part of the 1.5 module, for students in the first year of Masters, there was a 45 min. lecture on health and air pollutants. Course title: “Maladies pulmonaires: risques liés aux polluants de l’air” (“Lung diseases: risks related to air pollutants”).*

*As part of the 2.5 module M2.5 for students in the second year of Masters there was one 45-minute lecture dedicated to climate change, including the effect of air pollution on respiratory health.  
Course title: “Maladies chroniques à l’ère du réchauffement climatique et co-bénéfices santé/environnement.” (“Chronic diseases in the era of global warming and health/environment co-benefits”)*

*The topic is also covered in the 2.3 module for students in the second year of Masters, in the lecture  
Course title: “Santé globale: De quelles maladies transmissibles souffriront les populations d’ici et*

*d'ailleurs dans un futur proche””. (“Global health: Which communicable diseases will affect populations here and abroad in the near future?”).*

*This topic is further explored throughout the planetary health elective course given to 3rd year students, (“From planetary health to clinical practice”) in a 45-minute course that covers the major health impacts of climate change named “impact du changement climatique sur la santé” (“impact of climate change on health”), which explains the effects of pollution and fine particles on health.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: As part of the M2.5 module for students in the second year of Masters, there was one 45-minute lecture dedicated to climate change, including the effect of heat on the human body (e.g., heat stroke) and how to identify it, treat it, and prevent it.*

*Course title “Maladies chroniques à l’ère du réchauffement climatique et co-bénéfices santé/environnement.” (“Chronic diseases in the era of global warming and health/environment co-benefits”)*

*As part of the M2.3 module, there was a one 45-minute lecture covering the effect of climate change-related heat increase on health, including cardiovascular disease.*

*Course title: “Santé globale: des objectifs du millénaire aux objectifs du développement durable”. (“Global health: Which communicable diseases will afflict populations here and abroad in the near future?”).*

*This topic is further explored throughout the elective course “De la santé planétaire à la pratique clinique” (“From planetary health to clinical practice”) given to 3rd year students in a 45-minute course which explains the link between increased heat and cardiovascular as well as kidney diseases.*

*Course title: “Impact du changement climatique sur la santé” (“Impact of climate change on health”).*

**1.7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: As part of the B3.4 module for 3rd year Bachelor students, there is a course dedicated to the often ignored mental health consequences of climate change, including the link*

*between vulnerability to climate change effects and socioeconomically disadvantaged populations. Course title: “Changement climatique et son impact sur la santé mentale” (“Climate change and its impact on mental health”).*

*This topic is also explored in the elective course given to 3rd year students “De la santé planétaire à la pratique clinique” (“From planetary health to clinical practice”), in a 45 minute lecture, almost identical to the one in the core curriculum, that expands on the subject slightly.*

**1.8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation:*

*There are just a few slides in each course, which is why we graded it briefly rather than in depth.*

*The association of health with food and water security, biodiversity, and climate change are covered as part of the M2.5 module course for students in the second year of Masters.*

*Course title: “Maladies chroniques à l’ère du réchauffement climatique et co-bénéfices santé/environnement” (“Chronic diseases in the era of global warming and health/environment co-benefits”)*

*As part of the M2.3 module for students in the second year of masters, there was a one 45-minute lecture which briefly covered the effect of climate change on food and water security.*

*Course title: “Santé globale: De quelles maladies transmissibles souffriront les populations d’ici et d’ailleurs dans un futur proche?”. (“Global health: Which communicable diseases will affect populations here and abroad in the near future?”).*

*The topic of food security (but not water security) in the context of climate change is briefly discussed in the B3.7 module course for the third year of Bachelors titled “Alimentation et santé publique”, (“Food and public health”).*

*This topic is explored in depth in the elective course given to 3rd year students “De la santé planétaire à la pratique clinique” (“from planetary health to clinical practice”), throughout multiple lectures.*

*The topic of food and water security related to climate change and its impact of health is addressed in one lecture of the elective course titled “Équité des soins, équité en santé: des patients, des pathologies, des défis de santé publique” (“Equity of care, equity in health: patients, diseases, public health challenges”), aimed primarily for 3rd and 4th year students. Course title: “Crise climatique et équité en santé: Le défi du XXIème siècle?” (“Climate Crisis and Health Equity: The Challenge of the 21st Century?”).*

**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?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: As part of the M2.3 module for students in the second year of masters, there was a 45-minute lecture covering the effect of climate change, including brief mention of disproportionate impact on impoverished populations, specifically related to rising sea level and weather catastrophic events like hurricanes. However, this specific topic was only covered in 1 slide.*

*Course title: “Santé globale: De quelles maladies transmissibles souffriront les populations d’ici et d’ailleurs dans un futur proche” (“Global health: Which communicable diseases will affect populations here and abroad in the near future?”).*

*The social determinants of health and their links with climate changes is addressed in one lecture of the elective course titled “Équité des soins, équité en santé: des patients, des pathologies, des défis de santé publique” (“Equity of care, equity in health: patients, diseases, public health challenges”), aimed primarily for 3rd and 4th year students.*

*Course title: “Crise climatique et équité en santé: Le défi du XXIème siècle?” (“Climate Crisis and Health Equity: The Challenge of the 21st Century?”).*

*In the elective course given to 3rd year students “De la santé planétaire à la pratique clinique” (“from planetary health to clinical practice”), it is discussed how high income countries pollute the most when the most impacted are low income countries. There was also a 45 min lecture in this elective course on the complex links between climate change, migration and health, where the inequities of health due to migration were explored.*

*Course title: “Migrations humaines, environnement et enjeux sociaux” (“Human migrations, environment and social issues”)*

**1.10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation:*

*As part of the M2.3 module for 2nd year master students, there was a one 45-minute lecture covering the effect of climate change, with 1 slide detailing the greater vulnerability and exposure of global south countries to climate change. Course title: “Santé globale: De quelles maladies transmissibles souffriront les populations d’ici et d’ailleurs dans un futur proche” (“Global health: Which communicable diseases will affect populations here and abroad in the near future?”).*

The unequal regional health impacts of climate change globally is discussed in a 45 min lecture as part of the elective course “Équité des soins, équité en santé: des patients, des pathologies, des défis de santé publique” (“Equity of care, equity in health: patients, diseases, public health challenges”), aimed primarily for 3rd and 4th year students.

Course title: “Crise climatique et équité en santé: Le défi du XXIème siècle?” (“Climate Crisis and Health Equity: The Challenge of the 21st Century?”).

**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)?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: As far as we know, this topic is not covered in the core curriculum.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: As far as we know, this topic is not covered in the core curriculum.*

**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?**

3	Indigenous knowledge and value systems are <b>integrated throughout</b> the medical school’s planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included <b>briefly</b> in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: As far we know, this topic is not covered in the current curriculum.*

**1.14. Does your medical school 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?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation:*

*Although the impact of several environmental toxins on workers are thoroughly explored during lectures part of the 1.7 Module for 1st year master students, it does not specify the outsized impact of the toxins on marginalised populations but focuses more on the increased exposure of certain professions.*

*Course title: “La médecine du travail” (“Occupational medicine”).*

#### ***Curriculum: Sustainability***

**1.15. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation:*

*During the 3.7 module available to 3rd year bachelor students, there are a few slides on the lesser impact of vegan and vegetarian diets on carbon footprint, as well as the benefits on one’s health of reducing meat consumption. Nonetheless, the recommendations are not explicitly on adopting a plant-based diet, even though the EAT-Lancet plate is described.*

*Course title: “Alimentation et santé publique”, (“Food and public health”).*

*As part of the M2.5 module available to 2nd year students, the lower environmental impact of plant-based foods is mentioned and the association between meat consumption and cardiovascular diseases and cancer risk is presented. The EAT-Lancet recommended diet is presented as one that is “healthy, nutritious, and sustainable”.*

*Course title: “Maladies chroniques à l’ère du réchauffement climatique et co-bénéfices santé/environnement.” (“Chronic diseases in the era of global warming and health/environment co-benefits”).*

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: The carbon footprint of the healthcare system is briefly discussed in the following courses :</i></p> <ul style="list-style-type: none"> <li>-“<i>Maladies chroniques à l’ère du réchauffement climatique et co-bénéfices santé/environnement</i>” (“<i>Chronic diseases in the era of global warming and health/environment co-benefits</i>”) in the 2.5 module for 2nd year masters students.</li> <li>-“<i>Santé globale: De quelles maladies transmissibles souffriront les populations d’ici et d’ailleurs dans un futur proche</i>” (“<i>Global health: Which communicable diseases will affect populations here and abroad in the near future?</i>”).</li> <li>-<i>Crise climatique et équité en santé: Le défi du XXIème siècle?</i> (“<i>Climate Crisis and Health Equity: The Challenge of the 21st Century?</i>”) in the elective course “<i>Équité des soins, équité en santé: des patients, des pathologies, des défis de santé publique</i>” (“<i>Equity of care, equity in health: patients, diseases, public health challenges</i>”), aimed primarily for 3rd and 4th year students.</li> </ul> <p><i>In the elective course, “De la santé planétaire à la pratique clinique” (“from planetary health to clinical practice”) for third year students, there was a participative seminar of one afternoon on how to reduce the environmental footprint of hospitals, as well as a presentation of the footprint of the University Hospital of Geneva. The student’s final projects (as part of the elective course) were almost all done in this area.</i></p> <p><i>Nevertheless, a course dedicated to the carbon footprint of the healthcare system will be introduced in the next academic year: “empreinte environnementale du système de santé”.</i></p>	

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)	
2	The health <b>and</b> environmental <b>co-benefits</b> of <b>avoiding</b> over-medicalisation, over-investigation and/or over-treatment
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.
1	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	Environmental impact of <b>surgical</b> healthcare on planetary health and the climate crisis, and how can it be mitigated
1	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	The impact of <b>inhalers</b> on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	<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)
	<p><i>Score explanation:</i>  As part of the M2.5 module available to 2nd year students, there are mentions on the health and environmental co-benefits of non/pharmaceutical management of conditions such as outdoor activities or biking for transport, as well as two 45 minute lectures which included clinical cases with a practical approach and the benefits of medical deprescription. Deprescription was briefly mentioned in a gerontopsychiatry lecture (which cited smarter medicine and choosing wisely) in the M2.2 module. In the M2.3 module, there was a lecture on antibiotic prescription which mentioned the Onehealth approach. In the M2.4 module, a lecture talked about eco-toxicological risks and the need for rational/sober prescription.</p> <p><i>Course titles:</i>  “Maladies chroniques à l’ère du réchauffement climatique et co-bénéfices santé/environnement.” (“Chronic diseases in the era of global warming and health/environment co-benefits”).  “Docteur, pourquoi ne me prescrivez-vous rien?” (“Doctor, why won’t you prescribe me anything?”),  “Principals of anti-microbial”, (“Principals of anti-microbial therapy”),  “Arrêter un traitement psychotrope” (“How to stop a psychotropic treatment”).  “Interaction avec alimentation, habitudes et environnement”, (“Interaction with diet, habits and environment”).</p>

### **Curriculum: Clinical Applications**

<b>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?</b>	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the <b>core</b> curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in <b>elective</b> coursework.
0	No, there are <b>not</b> strategies introduced for having conversations with patients about climate change
<p><i>In the course “Maladies chroniques à l’ère du réchauffement climatique et co-bénéfices santé/environnement” (“Chronic diseases in the era of global warming and health/environment co-benefits”), students were encouraged to have conversations with patients about the health effects of climate change but there were no strategic components of clinical practice.</i></p> <p><i>In the 3rd year elective course on planetary health, there were open discussions on how to have these conversations with patients, but no concrete strategies presented.</i>  Course title: “De la santé planétaire à la pratique clinique” (“From planetary health to clinical practice”)</p>	

<b>1.19. In training for patient encounters, does your <u>medical school’s</u> curriculum introduce</b>	
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strategies for taking an environmental history or exposure history?	
2	Yes, the <b>core</b> curriculum includes strategies for taking an environmental history.
1	Only <b>elective</b> coursework includes strategies for taking an environmental history.
0	No, the curriculum does <b>not</b> include strategies for taking an environmental history.

*Score explanation: This is part of the clinical skills introduced to 3rd year bachelor students as part of the “anamnèse personnel, professionnel, et antécédents personnels” (“anamnesis on personal and professional history, and personal antecedents”) and in the 1.7 module for 1st year masters students in the course “médecine du travail” (“occupational medicine”) which stresses the importance of taking a detail environmental and exposure history.*

### *Curriculum: Administrative Support for Planetary Health*

1.20. Is your <b>medical school</b> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
4	Yes, the medical school is currently in the process of making <b>major</b> improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making <b>minor</b> improvements to ESH/planetary health education.
0	No, there are <b>no</b> improvements to planetary health education in progress.

*Score explanation: To summarise an email sent to the faculty by the “plateforme de durabilité” (“platform for health and sustainability”) created in 2022, the medical school is currently trying to make major improvements to the curriculum, including better longitudinal integration. Starting in spring of 2023 there will be a new course called “health and sustainability” given to 1st year bachelor students in the 1.5 module. Furthermore, a questionnaire was sent to all teachers to evaluate their interest in integrating PH topics into their courses, with 195 responses, most of which are interested in doing so. A formal position was created in the faculty to coordinate and support the integration of PH into the curriculum. A flyer which summarizes the changes and new learning objectives can be found at:*

<https://www.unil.ch/files/live/sites/durabilite-sante/files/formation/flyer%20durabilite%20medecine.pdf>

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <b>core</b> curriculum?	
6	Planetary health/ESH topics are <b>well integrated</b> into the core medical school curriculum.
4	<b>Some</b> planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in <b>(a) standalone lecture(s)</b> .
0	There is <b>minimal/no</b> education for sustainable healthcare.

*Score explanation: Although a few subjects are deeply covered in the core curriculum, the same lectures are often cited throughout the report card which points towards a lack in proper longitudinal integration. The only mention found for Planetary Health in the core curriculum is in the course “Maladies chroniques à l’ère du réchauffement climatique et co-bénéfices santé/environnement” (“Chronic diseases in the era of global warming and health/environment co-benefits”).*

*Important topics requiring better integration include, notably, the role of diet in health and disease, and the necessity of shifting towards plant-based diets in promoting and improving human and planetary health; the role of the social determinants of health, particularly the disproportionately greater impact of air pollution, heat exposure, and poor diets on socioeconomically underprivileged populations.*

*Some topics are better explored in the elective coursework. As described in the question above though, there are major improvements underway to better integrate planetary health courses in the curriculum and one of the main goals is to integrate the lectures longitudinally.*

**1.22. Does your medical school 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?**

1	<b>Yes, the <u>medical school</u> has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare</b>
0	<b>No, the <u>medical school</u> does <u>not</u> have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.</b>

*Score explanation: The “plateforme de durabilité et santé” (“health and sustainability platform”) has been created in 2022 with, among other goals, to better include PH and sustainable healthcare into the curriculum. The platform’s working group is composed of Prof. Renaud Du Pasquier, Dre Nelly Niwa, Prof. Nicolas Senn and DreSc. Julia Gonzalez and Sarah Michel. The last two aforementioned members are specifically employed as project coordinators, in order to modify and incorporate PH lectures into the curriculum.*

**Section Total (44 out of 72)**

**61.11%**

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*Are there additional curriculum resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

# Interdisciplinary Research

***Section Overview:*** *This section evaluates the quality and quantity of interdisciplinary planetary health research at the medical school and 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, medical schools 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>medical school</u>?</b>	
3	Yes, there are faculty members at the <b>medical school</b> who have a <b>primary</b> research focus in planetary health <b>or</b> healthcare sustainability.
2	Yes, there are individual faculty members at the <b>medical school</b> who are conducting research <b>related</b> to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the <b>institution</b> , but none associated with the medical school.
0	No, there are <b>no</b> planetary health and/or healthcare sustainability researchers at the <b>institution</b> or <b>medical school</b> at this time.
<p><i>Score explanation: Nicolas Senn is an associate professor who conducts research primarily related to health and the environment.</i>  <a href="https://applicationspub.unil.ch/interpub/noauth/php/Un/UnPers.php?PerNum=912378&amp;LanCode=37">https://applicationspub.unil.ch/interpub/noauth/php/Un/UnPers.php?PerNum=912378&amp;LanCode=37</a></p>	

<b>2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>?</b>	
3	There is <b>at least one</b> dedicated department or institute for interdisciplinary planetary health research.
2	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.
1	There is an <b>Occupational and Environmental Health department</b> , but no interdisciplinary department or institute for planetary health research.
0	There is <b>no</b> dedicated department or institute.
<p><i>Score explanation: There is currently no formal institute or department with active research on PH but there are plans to open one in the next 3 years especially since the creation of the health and sustainability platform (a collaboration between the MFac and the university's office of sustainability) which aims to promote interdisciplinary research on PH :</i>  <a href="https://www.unil.ch/durabilite-sante/home/menuinst/presentation.html">https://www.unil.ch/durabilite-sante/home/menuinst/presentation.html</a></p>	

**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 medical school?**

3	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.
2	Yes, there is a process in which community members impacted by climate and environmental injustice <b>advise</b> the climate + environmental research agenda.
1	<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.
0	There is <b>no</b> process, and <b>no</b> efforts to create such a process.

*Score explanation: We could not find any information.*

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

3	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.
2	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.
1	The <b>institution</b> has an <b>Office of Sustainability website</b> that includes <b>some</b> resources related to health and the environment.
0	There is <b>no</b> website.

*Score explanation: The university of Lausanne has an office of sustainability called the Centre de compétences en durabilité with a tab dedicated to research related to health and the environment :*

<https://www.unil.ch/centre-durabilite/recherche>  
<https://www.unil.ch/centre-durabilite/sante>

*The “Plateforme durabilité et santé” (“health and sustainability platform”) also has a website which better regroups recent news on planetary health research as well as past and future events (such as conferences and symposiums) :*

<https://www.unil.ch/durabilite-sante/home.html>

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

4	Yes, the <b>medical school</b> has hosted at least one conference or symposium on topics related to planetary health in the past year.
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3	Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the <b>institution</b> has hosted a conference on topics related to planetary health in the past three years.
1	The <b>institution</b> has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the <b>institution</b> has not hosted a conference on topics related to planetary health in the past three years.
<p><i>Score explanation: On the 30st of november 2023 was celebrated the 20th anniversary of the Med Faculty. The evening's theme was sustainability, and several presentations on the subject of planetary health were given.</i></p> <p><i>The event is described here</i></p> <p><i>:<a href="https://www.unil.ch/durabilite-sante/home/menuinst/evenements/20-ans.html">https://www.unil.ch/durabilite-sante/home/menuinst/evenements/20-ans.html</a></i></p>	

<b>2.6. Is your <u>medical school</u> a member of a national or international planetary health or ESH organisation?</b>	
1	Yes, the medical school is a member of a national or international planetary health or ESH organisation
0	No, the medical school is <b>not</b> a member of such an organisation
<p><i>Score explanation : Although Lausanne's medical school is part of SWIMSA (Swiss Medical Students' Association) which has a group dedicated to integrate more classes on planetary health, there is no formally recognized national planetary health organization. The Lausanne medical school isn't part of an international planetary health organisation either.</i></p>	

<b>Section Total (12 out of 17)</b>	<b>70.59%</b>
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*Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

## 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 <b>medical school</b> partner with community organisations to promote planetary and environmental health?	
3	Yes, the <b>medical school</b> meaningfully partners with <b>multiple</b> community organisations to promote planetary and environmental health.
2	Yes, the <b>medical school</b> meaningfully partners with <b>one</b> community organisation to promote planetary and environmental health.
1	The <b>institution</b> partners with community organisations, but the medical school is not part of that partnership.
0	No, there is <b>no</b> such meaningful community partnership.
<p><i>Score explanation: There are informal partnerships but the medical school is not officially partnered with community organizations to promote planetary and environmental health.</i></p>	

3.2. Does your <b>medical school</b> offer community-facing courses or events regarding planetary health?	
3	The <b>medical school</b> offers community-facing courses or events at least once every year.
2	The <b>medical school</b> offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The <b>institution</b> has offered community-facing courses or events, but the <b>medical school</b> was not involved in planning those courses or events.
0	The <b>institution/medical school</b> have not offered such community-facing courses or events.
<p><i>Score explanation: For the Mystères de l'UNIL (a university event open to families and schools with the goal of introducing them to sciences and the university's research through workshops, discussions and activities), the university held a public discussion called "le changement climatique impacte-t-il la santé?" ("does climate change impact health?") which explored the following questions: What is the situation in the countries of the global south, already heavily impacted by climate change? What lessons can we learn from them? In Switzerland, what is the impact of the healthcare system on the environment?</i></p>	

*What are the consequences of global warming on the expansion of invasive species such as the tiger mosquito?*

**3.3. Does your medical school have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?**

2	Yes, all students <b>regularly</b> receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are <b>sometimes</b> included in communication updates.
0	Students <b>do not</b> receive communications about planetary health or sustainable healthcare.

*Score explanation: Emails are sent from the university's office of sustainability but the contents are not necessarily related to planetary health. Planetary health related events are nonetheless still communicated to the students, such as upcoming conferences organised by the health and sustainability Platform.*

**3.4. Does the institution or main affiliated hospital trust 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?**

2	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.
1	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 providers
0	There are <b>no</b> such accessible courses for post-graduate providers

*Score explanation: There is compliance with the cantonal 2030 agenda. The Office for Sustainability of the State of Vaud provides meetings, exchanges and training for the members of the ReD. There does not seem to be any post-graduate teaching on PH. Nonetheless, a new CAS (post-graduate certificate) called "Santé environnementale et durabilité" ("Environmental health and sustainability") will be proposed by La Source in spring of 2024. This post-graduate course targets health professionals and "aims to develop an informed and critical perspective, enabling in-depth understanding of environmental health and sustainability issues in healthcare practice and the community".*

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

2	Yes, the <b>medical school</b> or <b>all affiliated hospitals</b> have accessible educational materials for patients.
1	<b>Some</b> affiliated hospitals have accessible educational materials for patients.

0	<b>No</b> affiliated medical centres have accessible educational materials for patients.
<i>Score explanation: As far as we know, there is no such material accessible for patients</i>	

<b>3.6. Does your <u>medical school</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?</b>	
2	Yes, the <b>medical school</b> or <b>all affiliated hospitals</b> have accessible educational materials for patients.
1	<b>Some</b> affiliated hospitals have accessible educational materials for patients.
0	<b>No</b> affiliated hospitals have accessible educational materials for patients.
<i>Score explanation: As far as we know, there is no such material accessible for patients.</i>	

<b>Section Total (2 out of 14)</b>	<b>14.29%</b>
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*Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

## 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>medical school</u> or your <u>institution</u> offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the <b>medical school</b> or <b>institution</b> <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.
1	The <b>medical school</b> or <b>institution</b> encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, <b>but</b> there is no student funding available and there is no requirement to participate.
0	No, <b>neither</b> the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.

*Score explanation: Although students can choose to do a project in sustainability (for a master's thesis for instance), there is no student funding available and there is no requirement to participate.*

4.2. Does your <u>institution</u> offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The <b>institution</b> has a <b>specific</b> research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these <b>require student initiative</b> to seek these out and carry them out in their spare time.
0	There are <b>no opportunities</b> for students to engage in planetary health/sustainable healthcare research.

*Score explanation: Under the guidance of Nicolas Senn, students can undertake their master's thesis research related to planetary health. Other professors also offer the possibility to their students to do their master thesis on the links between health and the climate crisis or planetary health. However, there is no specific research program or fellowship.*

4.3. Does the <u>medical school</u> have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
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2	The <b>medical school</b> has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a <b>medical school</b> webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is <b>no medical-school</b> specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
<p><i>Score explanation: The webpage of the sustainability platform includes up-to-date information on PH. <a href="https://www.unil.ch/durabilite-sante/home.html">https://www.unil.ch/durabilite-sante/home.html</a></i></p>	

<b>4.4. Does your <u>medical school</u> have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?</b>	
2	Yes, there is a student organisation <b>with faculty support</b> at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it <b>lacks faculty support</b> .
0	No, there is <b>not</b> a student organisation at my institution dedicated to planetary health or sustainability in healthcare.
<p><i>Score explanation: The association “Health for Future Lausanne” is composed of medical students that advocate for planetary health and sustainable practices in healthcare. The association is in correspondence with representatives of the “plateforme durabilité et santé” and the university’s office of sustainability.</i></p>	

<b>4.5. Is there a student liaison representing sustainability interests who serves on a <u>medical school</u> or <u>institutional</u> decision-making council to advocate for curriculum reform and/or sustainability best practices?</b>	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.
<p><i>Score explanation: The association Health for Future is in close contact with the Plateforme de durabilité. A formal student-liaison position could however be created to participate in decision-making committees.</i></p>	

<b>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)</b>	
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1	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.
1	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.
1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	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)
<p><i>Score explanation: There are a number of student associations such as Unipoly and LAPEL' with permaculture projects on campus (<a href="https://www.unil.ch/durable/jardin_potager">https://www.unil.ch/durable/jardin_potager</a>).</i>  UNIL's sports center proposes a number of organized outdoors sports: <a href="https://sport.unil.ch/?mid=89">https://sport.unil.ch/?mid=89</a></p>	

<b>Section Total (9 out of 15)</b>	<b>60%</b>
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*Are there additional student-led initiative resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

# Campus Sustainability

**Section Overview:** This section evaluates the support and engagement in sustainability initiatives by the medical school and/or 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>medical school</u> and/or <u>institution</u> have an Office of Sustainability?	
3	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 and/or medical school.
2	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 medical school and/or hospital sustainability.
1	There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee
0	There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability
<p><i>Score explanation: The university has an office of sustainability called the “Centre de compétences en durabilité” with multiple full-time staff. DreSc. Julia Gonzalez Holguera is “chargée de projet Durabilité” (“project manager of sustainability”) and coordinates between the office of sustainability and the medical school. Sarah Michel is also “chargée de projet” (“project manager”).</i></p>	

5.2. How ambitious is your <u>institution/medical school</u> plan to reduce its own carbon footprint?	
5	The institution/medical school has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2030</b>
3	The institution/medical school has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2040</b>
1	The institution/medical school 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>
0	The institution/medical school does <b>not</b> meet any of the requirements listed above
<p><i>Score explanation: The canton has set itself the goal of achieving carbon neutrality for its administrations by 2040. UNIL will no longer be heated with gas and oil by 2025, as a heat pump system using lake water will be put in place. UNIL is even more ambitious in implementing a strategy than on the cantonal level. (Plan climat vaudois (pdf, 6.41 Mo)</i></p>	

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

3	Yes medical school buildings are <b>100%</b> powered by renewable energy
2	Medical school buildings source <b>&gt;80%</b> of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source <b>&gt;20%</b> of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source <b>&lt;20%</b> of energy needs from off-site and/or on-site renewable energy.

*Score explanation: According to the analysis conducted by Centre de compétences en durabilité which took into account the buildings on the UNIL campus as well as some teaching spaces at the hospital campus, more than 80% of the medical school buildings are powered by renewable energy.*

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

3	Yes, sustainable building practices are utilised for new buildings on the medical school campus and the <b>majority</b> of old buildings <b>have been retrofitted</b> to be more sustainable.
2	Sustainable building practices are utilised for new buildings on the medical school campus, but most old buildings have <b>not been retrofitted</b> .
1	Sustainable building practices are <b>inadequately or incompletely</b> implemented for new buildings.
0	Sustainability is <b>not considered</b> in the construction of new buildings.

*Score explanation: UNIL has a renovation program that is certified as a "2000-watt site", i.e. one that aims for 100% renewable energy, minimal CO2 emissions in construction and supply, and the new buildings meet the criteria of the Canton of Vaud, which wishes to integrate sustainable development principles into construction.*

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

2	Yes, the medical school or 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.
1	The medical school or institution has implemented <b>some</b> strategies to provide environmentally-friendly transportation options, but the options are <b>unsatisfactorily</b> accessible or advertised.

0	The medical school or institution has <b>not</b> implemented strategies to encourage and provide environmentally-friendly transportation options.
<p><i>Score explanation: The medical school pays 120 francs for ELMs (enseignements au lit du malade) to 3rd year students in order to buy a half-fare at the CFF, so it encourages the use of public transport. There are also places to park bicycles at the different buildings. There is a mobility plan for the CHUV staf. There are subsidies to encourage soft mobility such as electrically assisted bicycles. There are allowances for employees who have a minimum of 50% of their activity. The faculty is easily accessible by public transport (bus or metro).</i></p>	

5.6. Does your <u>medical school</u> have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
2	Yes, the medical school has <b>both</b> compost <b>and</b> recycling programs accessible to students and faculty.
1	The medical school has <b>either</b> recycling <b>or</b> compost programs accessible to students and faculty, but not both.
0	There is <b>no</b> compost or recycling program at the medical school.
<p><i>Score explanation: There is a compost in the underground of the CHUV which is transformed into biogas. Since 2021, there is a new recycling channel for expanded polystyrene.</i></p>	

5.7. Does the <u>medical school</u> apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
3	Yes, the medical school 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.
2	There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The medical school <b>is engaged</b> in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The medical school is <b>not</b> engaged in efforts to increase food and beverage sustainability.
0	There are <b>no</b> sustainability guidelines for food and beverages.
<p><i>Score explanation: The CHUV cafeteria (which is open to medical students and staff) is committed to favouring food in accordance with the IPCC recommendations to reduce the carbon impact of catering. 43% of foodstuffs are produced within a radius of 160km and 63% within a radius of 250 km, all of which are local products according to CHUV criteria. At the CHUV cafeteria, there is one vegetarian day per week.</i></p>	

5.8. Does the <u>medical school</u> or <u>institution</u> apply sustainability criteria when making decisions
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about supply procurement?	
3	Yes, the medical school has <b>adequate</b> sustainability requirements for supply procurement <b>and</b> is <b>engaged</b> in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are <b>insufficient or optional</b> . The medical school is <b>engaged</b> in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are <b>insufficient or optional</b> . The medical school is <b>not engaged</b> in efforts to increase sustainability of procurement.
0	There are <b>no</b> sustainability guidelines for supply procurement.

*Score explanation: From what has been transmitted by a source from the office of sustainability, there are some guidelines, but it depends on the type of supplies. The purchase of paper, cleaning products and real estate, as well as computer equipment, are well managed.*

5.9. Are there sustainability requirements or guidelines for events hosted at the <u>medical school</u> ?	
2	Every event hosted at the medical school <b>must</b> abide by sustainability criteria.
1	The medical school <b>strongly recommends or incentivizes</b> sustainability measures, but they are <b>not required</b> .
0	There are <b>no</b> sustainability guidelines for medical school events.

*Score explanation: As far as we know, no guidelines exist for events hosted at the medical school.*

5.10. Does your <u>medical school</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
2	Yes, the medical school has <b>programs</b> and <b>initiatives</b> to assist with making lab spaces more environmentally sustainable.
1	There are <b>guidelines</b> on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are <b>no</b> efforts at the medical school to make lab spaces more sustainable.

*Score explanation: The Institute of Microbiology has partnered with the Platform for Sustainability and Health of the Faculty of Biology and Medicine for a symposium entitled: “Demain, une médecine durable” (“Tomorrow, sustainable medicine”). The Sustainable European Laboratories network and Green Labs were presented during the first conference of the health and sustainability platform. In the DNF (department of fundamental neurosciences), there is a sustainability team with the goals of measuring the CO2 footprint in the labs and identifying actions that need to be implemented, with suggestions that can then be implemented on a faculty level. “Several of the Transition Assembly’s proposals concern laboratory equipment, which has been identified as a major item in UNIL’s environmental footprint. In November 2023, management launched a working group on the environmental impact of laboratories at UNIL.”*

5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?	
4	The institution is <b>entirely divested</b> from fossil fuels <b>and</b> has made a <b>commitment to reinvest divested funds</b> into renewable energy companies or renewable energy campus initiatives.
3	The institution is <b>entirely divested</b> from fossil fuels.
2	The institution has <b>partially divested</b> from fossil fuel companies <b>or</b> has made a <b>commitment to fully divest</b> , but <b>currently</b> still has fossil fuel investments.
1	The institution has <b>not divested</b> from fossil-fuel companies, but faculty and/or students are <b>conducting organised advocacy</b> for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been <b>no efforts</b> to change that.
<p><i>Score explanation: UNIL is a signatory to a responsible investment charter, concerned with environmental, social and governance issues. It aims to reduce the portfolio's exposure to fossil fuels by excluding companies whose revenue depends on coal mining/extraction or the production of coal for energy.</i></p>	
<p><b>Section Total (23 out of 32)</b> <span style="float: right;"><b>71.88%</b></span></p>	

Back to Summary Page [here](#)

*Are there additional sustainability resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

# 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 University of Lausanne School of Medicine

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

Section	Raw Score %	Letter Grade
<b>Planetary Health Curriculum (30%)</b>	$(44/72) \times 100 = 61.11\%$	B-
<b>Interdisciplinary Research (17.5%)</b>	$(12/17) \times 100 = 70.59\%$	B
<b>Community Outreach and Advocacy (17.5%)</b>	$(2/14) \times 100 = 14.29\%$	F
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	$(9/15) \times 100 = 60\%$	B-
<b>Campus Sustainability (17.5%)</b>	$(23/32) \times 100 = 71.88\%$	B
<b>Institutional Grade</b>	$(A \times 0.3 + B \times 0.175 + C \times 0.175 + D \times 0.175 + E \times 0.175) = 56.26\%$	C+

# Report Card Trends

## Section Overview

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

