



Planetary Health Report Card:

University College Cork

2021-2022



2021-2022 Contributing Team:

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Summary of Findings

Overall	C
<u>Curriculum</u>	C-
<ul style="list-style-type: none"> University College Cork (UCC) School of Medicine (SoM) includes brief discussions on planetary health primarily in the core curriculum content on public health in the preclinical years. These discussions, while valuable, tend to be indirect and limited in scope in respect to climate change and planetary health. References to sustainability are similarly limited. Recommendations: Engage students with discussions, in each of the core body systems' teaching or in the CP modules, on how climate change and planetary health impacts health and disease. These discussions may include relevant history and examination findings, and sustainability in clinical practice as well as in health behaviours. 	
<u>Interdisciplinary Research</u>	C
<ul style="list-style-type: none"> Interdisciplinary research is a highly respected and cultivated process at UCC. The Environmental Research Institute, the APC Microbiome Institute, and MaREI Institute for energy, climate, and marine research are some that exist pertaining to the areas of planetary health, sustainability, and public health. Recommendations: A simple but powerful advance in this metric would result from the SoM promoting and encouraging socioculturally conscious, planetary health related, and community-need based projects that are by their nature interdisciplinary and highly impactful in terms of human healthcare. 	
<u>Community Outreach and Advocacy</u>	D+
<ul style="list-style-type: none"> UCC SoM has little community outreach relating to planetary health. The SoM offers 1 CPD course related to planetary health and some opportunities for research, however these are not well known and perhaps not well utilised. UCC as a whole does well with community outreach, offering many courses and events on sustainability. Recommendations: The SoM could look into officially incorporating existing university initiatives into the SoM website, buildings, and events to increase their community partnerships relating to planetary health. 	
<u>Support for Student-Led Initiatives</u>	C
<ul style="list-style-type: none"> Support for student-led initiatives mostly comes from the wider university rather than the SoM. The SoM has shown some support for UCC's student working group under Irish Doctors for the Environment (IDE). Newly this year, a faculty member in the School of Public Health has shown interest in augmenting planetary health topics taught to medical students. Recommendations: We recommend the SoM provide more resources and guidance to students who would like to pursue an interest in planetary health. 	
<u>Campus Sustainability</u>	C+
<ul style="list-style-type: none"> UCC as a whole does very well in its efforts to have a sustainable campus. Sustainable building practises, multiple recycling efforts, and green energy initiatives are some of the many reasons UCC was the first to earn its Green Flag from the Foundation for Environmental Education in 2010. Recommendations: The SoM could implement sustainability guidelines specifically targeted for the students and staff at the Brookfield and Western Gateway campuses in order to minimise waste and consumption. This could be achieved by promoting use of reusable cups or silverware, or improving composting/recycling. Environmentally friendly transportation options between hospitals and the medical campus should be encouraged. Alternatively, the SoM may consider offering hybrid learning options for those that are able in order to minimise unnecessary or long commutes. 	

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 analyzing 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 practises 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 “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”. 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.
- **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 (for example, undergraduate departments (USA), other related departments eg 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 mold 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. Paediatrics, 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 example).

Literature Review of Metrics

Added to our resources this year, 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. Did your medical school 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 more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.

Score explanation:
 UCC Medical School does not offer electives specifically related to Education for Sustainable Healthcare (ESH) or Planetary Health. However, the modules MX1006/ MX2006/ and MX3006 modules, offered in first/ second/ and third year respectively, are student-selected special electives in which students can self-direct and incorporate planetary health should they desire. The official stated objective of the module allows students the freedom to self-organise a module in an area of special interest in Medicine.

Of note, the School of Public Health has recently engaged in a grant from the EU for the purpose of formulating a new curriculum and learning materials on the health impacts of climate change. The output of this will be an online module and associated resources freely available. Once developed, this is said to have potential as an elective for medical students as well. While this is very exciting for the future, it is still in development and not currently offered, therefore cannot yet enhance the score for this metric.

Curriculum: Health Effects of Climate Change

2. Does your medical school curriculum address the relationship between extreme heat, health risks, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: The module HC2002, or MX2020 for graduate entry, contained one lecture that covered climate change and key environmental issues in public health.</i>	

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 in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: The module HC2002, or MX2020 for graduate entry, contained one lecture that covered climate change and key environmental issues in public health; this included discussions on extreme weather and health impacts.</i>	

4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: The module HC2002, or MX2020 for graduate entry, contained one lecture that covered climate change and key environmental issues in public health that discusses this. Additionally, the module FM3005, or GM1002 for graduate entry, on fundamentals of disease discusses changing infection patterns in its lecture on infectious diseases.</i>	

5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?

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

Score explanation:

The module HC2002, or MX2020 for graduate entry, contained one lecture that covered climate change and key environmental issues in public health that discusses this. Additionally, the module FM3005 (or GM1002 for graduate entry) on fundamentals of disease discusses the respiratory impacts of air pollution briefly.

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

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

Score explanation:

The module HC2002, or MX2020 for graduate entry, contained one lecture that covered climate change and key environmental issues in public health; this included discussions on extreme weather and health impacts.

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

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

Score explanation:

This is not listed in any of the course curricula.

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 in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation:

The module HC2002, or MX2020 for graduate entry, contained one lecture that covered climate change and key environmental issues in public health; it discusses the sustainable development goals, health system adaptation to climate change, and global transformations in public health.

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 in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation:

The module HC2002, or MX2020 for graduate entry, contained one lecture that covered climate change and key environmental issues in public health; this included brief discussions on vulnerable population groups.

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

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

Score explanation:

The module HC2002, or MX2020 for graduate entry, contained one lecture that covered climate change and key environmental issues in public health; this included brief discussions on vulnerable population groups by global region as well.

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

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 in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> The 4th year module CP4003 on reproduction, pregnancy, child health, and development, and the 5th year module CP5400 on the principles of obstetrics and gynaecology both mention primary and secondary disease prevention. They briefly cover environmental risks of miscarriage. However, this is not consistently covered and not explicitly included in the learning outcomes.</p>	

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 in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: This is not listed in any of the course curricula.</i></p>	

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 integrated throughout the medical school's planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: This is not listed in any of the course curricula.</i></p>	

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 in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation:

While the aforementioned module HC2002 (or MX2020 for graduate entry), contained one lecture that covered climate change and key environmental issues in public health, briefly discussing vulnerable populations, it does not cover the impact of anthropogenic environmental toxins on marginalised populations.

Curriculum: Sustainability

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

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

Score explanation:

Lesson 11 of HC2002, or GM2020 for graduate entry, "Climate Change, Food, and Health," includes discussions on diet, food systems, and the environment. This is a new addition to the core curriculum this year.

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

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

Score explanation:

This topic is covered in a lecture given during the CP4006 course, entitled “Sustainable Anaesthesia,” which outlined the degree to which anaesthetic agents contribute to the carbon footprint of the healthcare system.

This is also briefly discussed in the HC2002 (MX2020) module in one lecture entitled “Climate Change and Key Environmental Issues in Public Health.”

17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (1 point each)

1	Waste production within the healthcare system and strategies for reducing waste in clinical activities, such as in the operating room
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally anaesthetic gas options with reduced greenhouse gas emissions
1	The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfil this metric.
1	The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes for obesity. This is commonly known as social prescribing in the UK.
1	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment

Score explanation:

In the lecture during the CP4006 module “Sustainable Anaesthesia,” waste management and efficient use of resources is discussed. A lecture given during the CP4006 course, entitled “Sustainable Anaesthesia”, outlined the degree to which anaesthetic agents contribute to the carbon footprint of the healthcare system.

Curriculum: Clinical Applications

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?

2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
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1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	No, there are not strategies introduced for having conversations with patients about climate change
<p><i>Score explanation:</i> While such strategies are not included in the core or elective coursework for medical students at UCC, efforts are being made to integrate this topic in clinical training. As a first step, this guide is compulsory reading for second year undergraduate medical students as part of the module HC2002, Health in the Community.</p>	

19. In training for patient encounters, does your medical school’s curriculum introduce strategies for taking an environmental history or exposure history?	
2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.
<p><i>Score explanation:</i> In the CP2001 module, or GM1010 for graduate entry, students are encouraged to ask about limited risk factors when taking a respiratory history, although the extent of this is limited. This is further developed in CP4006 as students are told to ask about specific environmental risk factors for disease, however a specific environmental history is not developed. While it is referred to in the core curriculum, it is not stressed and we feel it is not sufficiently developed or encouraged to justify a score of 2.</p>	

Curriculum: Administrative Support for Planetary Health

20. Is your medical school 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 major improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	No, there are no improvements to planetary health education in progress.
<p><i>Score explanation:</i> The HC2002, or GM2020 for graduate entry, mandatory modules on public health and epidemiology have increased the content pertaining to planetary health. Their introductory lecture specifically focuses on the differences between and factors involved in planetary health, vs global health, vs one health.</p>	

Furthermore, the School of Public Health has recently engaged in a grant from the EU for the purpose of formulating a new curriculum and learning materials on the health impacts of climate change. The output of this will be an online module and associated resources freely available. Once developed, this is said to have potential as an elective for medical students as well.

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

6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some 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 (a) standalone lecture(s).
0	There is minimal/no education for sustainable healthcare.

*Score explanation:
These topics are primarily addressed in individual lectures and rely heavily on standalone lectures. The epidemiology and public health mandatory modules mentioned earlier provide a brief foundation for further teaching on the topics of ESH and planetary health.*

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

*Score explanation:
UCC School of Medicine does not yet have a member of faculty to specifically oversee planetary health and sustainable healthcare integration. Longitudinal education on themes in planetary health do not yet exist in the School of Medicine; however, the School of Public Health that hosts some mandatory teaching to medical students does engage planetary health briefly and has ESH as an increasingly important learning objective. The School of Public Health does have primary faculty members dedicated to this goal.*

Section Total (out of 69)	31
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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.*

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the School of Medicine who are conducting research related 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 institution, but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation:</i> <i>Although not associated directly with the School of Medicine, there are a great number of researchers at UCC that are working within a vast span of planetary health and healthcare sustainability research at the institution e.g., Environmental Research Institute, APC Microbiome Institute and MaREI, the Science Foundation Ireland's Research Centre for Energy, Climate and Marine.</i></p>	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?	
3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years.
1	There is an Occupational and Environmental Health department, but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.
<p><i>Score explanation:</i></p>	

The Environmental Research Institute at UCC is a university flagship research institute that brings together over 350 researchers from 17 UCC Schools and Departments and 6 Research Centres to work with an interdisciplinary approach to address global sustainability challenges.

See [UCC outline of research and innovation in the area of sustainability and climate action](#)

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 decision-making power in the climate + environmental research agenda.
2	Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda.
1	No, but there are current efforts to establish a process for community members to advise or make decisions on the research agenda.
0	There is no process, and no efforts to create such a process.

Score explanation:

There are no ongoing institutional efforts specific to establishing environmental injustice, intersectionality, or community needs based research goals.

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 easy-to-use, adequately comprehensive website that centralises various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
2	There is a website that attempts to centralise various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.
0	There is no website.

Score explanation:

UCC's [Environmental Research Institute](#) is a website that centralises ongoing and past research related to the environment. This is not its primary role and, while easy-to-use and updated, it is not comprehensive or designated to planetary health. Therefore, this metric receives a compromised score of 2.

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

4	Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.
1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.

Score explanation:
 UCC hosted a few events in 2021, including a climate conference, a [virtual COVID conference](#), and a free online webinar discussing sustainable food production, promoting healthy initiatives in the community setting, and the problem/ solutions to food waste.

6. Is your medical school a member of a national or international planetary health or ESH organisation?

1	Yes, the medical school is a member of a national or international planetary health or ESH organisation
0	No, the medical school is not a member of such an organisation

Score explanation:
 UCC is not a member of any national or international planetary health or ESH organisation (such as Planetary Health Alliance, Global Consortium on Climate and Health Education, KLUG, etc). However, it is important to note that UCC has won multiple [designations as a green campus](#) and has “world class ranking” for green sustainability.
 Furthermore, the Global Consortium on Climate and Health Education (GCCHE) have recently invited UCC to join as a member and efforts are being made by the students to encourage the faculty to accept the invitation.

Section Total (out of 17)	9
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Community Outreach and Advocacy

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

1. Does your medical school partner with community organisations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organisations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organisation to promote planetary and environmental health.
1	The institution partners with community organisations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.

Score explanation:
There is a student-led group promoting and advocating for planetary health and sustainability in healthcare (UCC student working group under Irish Doctors for the Environment). Although UCC's Medical School was not officially associated with this group, recent discussions with the faculty have revealed that there exists multidirectional support for the planetary health initiatives. A faculty member at UCC's School of Public Health has been appointed primary liaison and an invitation has been received to present findings from the present report card.

UCC as a whole is involved in multiple community initiatives to promote environmental sustainability and planetary health.

See <https://www.ucc.ie/en/greencampus/>

2. Does your medical school offer community-facing courses or events regarding planetary health?	
3	The medical school offers community-facing courses or events at least once every year.
2	The medical school 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 institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The medical school has not offered such community-facing courses or events.
<p><i>Score explanation:</i> UCC offers community facing education regarding planetary health in the form of an APC (Adult Continuing Education) course entitled 'Environment, Sustainability and Climate'</p> <p>See module information here</p> <p>These events and courses are offered by UCC, and not UCC's School of Medicine specifically, hence this metric receives a score of 1.</p>	

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 regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	Students do not regularly receive communications about planetary health or sustainable healthcare.
<p><i>Score explanation:</i> There was no evidence found of regular communications regarding planetary health or sustainability in healthcare by the medical school. Various environmental sustainability initiatives are communicated through UCC's website, however this is no in affiliation with the UCC School of Medicine. The medical school does not hold an Office of Sustainability.</p>	

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 institution or main affiliated hospital trust offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health.
1	Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are no such accessible courses for post-graduate providers
<p><i>Score explanation:</i> UCC offers one CPD (Continuing Professional Development) course, entitled 'EH6140 Environmental Health: Principal Aspects and Burden of Disease'</p>	

See module information [here](#)

5. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about environmental health exposures?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centres have accessible educational materials for patients.

Score explanation:

Educational material is free and available through the HSE website, but these resources can be made far more comprehensive, accessible, and be integrated into conversations held in clinical practice and teaching.

See the HSE's brief outline of health impacts of climate change [here](#)

6. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about climate change and health impacts?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated hospitals have accessible educational materials for patients.

Score explanation:

Educational material is free and available through the HSE website, but these resources can be made far more comprehensive, accessible, and be integrated into conversations held in clinical practice and teaching.

See the HSE's brief outline of health impacts of climate change [here](#)

Section Total (out of 14)

5

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.*

1. Does your institution offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school 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.
0	No, the institution does not offer opportunities or support for sustainability initiatives or QI projects.
<p><i>Score explanation:</i> <i>The medical school has shown encouragement and support of planetary health and quality improvement initiatives through conversations with the UCC's student working group under Irish Doctors for the Environment. However, there are minimal initiatives at this point in time. No grants are available for sustainable initiatives, and sustainability QI projects are not part of the core curriculum.</i></p>	

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific 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 require student initiative to seek these out and carry them out in their spare time.
0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.
<p><i>Score explanation:</i> <i>Research opportunities are available through final research project courses and as part of electives; however, a sustainability or planetary health related project would be entirely on the volition of the student engaged in the project.</i></p>	

3. Does the medical school 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.

2	The medical school has a web page 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 medical school 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 no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.

Score explanation:

There are no medical school specific webpages to find planetary health or sustainable healthcare projects or mentors. Faculty and staff working towards sustainability in the medical school are mainly sought out through word-of-mouth. UCC as a whole does have websites dedicated to sustainability in the institution at large, as well as an annual Sustainability Report.

See [UCC's annual sustainability report 2019-2020](#)

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

2	Yes, there is a student organisation with faculty support 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 lacks faculty support.
0	No, there is not a student organisation at my institution dedicated to planetary health or sustainability in healthcare.

Score explanation:

The UCC working group under the Irish Doctors for the Environment organisation is a student-run initiative that is not an official UCC society, but is run by UCC medical students. The medical school has shown interest and support for this student group and in planetary health initiatives, advocacy, and future education. However, faculty are newly aware of this group; changes to the curriculum and other initiatives are still in developmental stages. This year, a faculty member has been appointed to be the primary contact person and liaison for sustainable initiatives with the medical school and on the medical school curriculum committee's board, which is an improvement in this regard.

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

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.

Score explanation:
 While there are two designated class representatives from every year group in the School of Medicine that have privy to curriculum committee discussions and have the space to offer input, their role is primarily to convey messages to and from the class at large regarding the course content or structure - not offer input on curriculum reform.

We would like to acknowledge, however, that this year this Planetary Health Report Card will be presented to both undergraduate and graduate entry Medical Curriculum Committees. We hope this input is accepted, integrated, and sustained going forward. However, this one time invitation to present these findings does not warrant a point for this metric.

6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)

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)

Score explanation:
 The medical school specifically has not been involved in agriculture projects, planetary health specific events or talks, or community out-reach. There are some initiatives and events carried out by independent organisations or by student-led societies.

UCC's Emergency Care Society student group tends to host related events such as a wilderness medicine course, and talks on treating medical complications of extreme environments. Given the medical nature of these events, and the affiliation of the Emergency Care Society with the medical school, a point was awarded for panels and speakers related to planetary health and wilderness or outdoor courses. Adjacent efforts are made by other societies such as UCC's Environmental Society, or UCC's Vegan Society.

The [Glucksman Art Gallery](#) within UCC's broader campus area has instalments exploring the environment and is free for students to explore. Furthermore, UCC has a prolific [Community Garden](#), also within the broader campus area, is open to access by staff, students, and members in the community.

Section Total (out of 15)

8

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 practises, and show other sectors what is possible when it comes to minimising environmental impact.*

1. Does your medical school and/or institution 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 at least one designated staff member 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 no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff, but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Score explanation:</i> UCC established the Green Campus Programme, which has members from across the college community and includes staff and student representatives, and key personnel with responsibilities in relation to the sustainability strategy. Chaired by President John O’Halloran and Mark Poland (Director of Buildings and Estates), the forum meets regularly to drive forward the Green Campus project and sustainability within UCC. The sustainability officer is Dr. Maria Kirrane and the designated student health officer is Dr. Michael Byrne.</p> <p>See UCC Green Campus overview</p>	

2. How ambitious is your medical school/institution’s plan to reduce its own carbon footprint?	
4	The institution has a stated goal of carbon neutrality by 2030 or earlier and the medical school / institution has a well-defined and adequate plan in place to achieve this goal.
3	Yes, there is a stated carbon neutrality goal by at least 2040 and the medical school/institution has a well-defined and adequate plan in place to achieve this goal.
2	Yes, there is a stated carbon neutrality goal by at least 2040, but the medical school/institution has not created a plan to reach that goal or the plan is inadequate.
1	There is a CO2 emission reduction goal, but it is not one of carbon neutrality.

0	There is no stated goal for reduction of CO2 emissions.
<p><i>Score explanation:</i> UCC continually monitors its carbon footprint including scope 1, scope 2 and scope 3 emissions as determined by the Greenhouse Gas Protocol Corporate Standard. UCC's Buildings and Estates and the Cleaner Production Promotion Unit implemented a project in August 2019 to refine scope 3 measurements in order to propose a plan to reduce CO2 emissions. However, there is no statement or commitment made pertaining to goals for achieving carbon neutrality that we could find.</p> <p>See UCC's STARS report on greenhouse gas emissions</p> <p>See UCC's annual sustainability report 2019-2020</p>	

3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilise renewable energy?	
3	Yes medical school buildings are 100% powered by renewable energy
2	Medical school buildings source >80% of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source >20% of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.
<p><i>Score explanation:</i> Since May 2020, 100% of the electricity purchased by UCC has been supplied from a renewable source. However, because this renewable electricity is supplied through the national grid it is more appropriate to use a grid average carbon intensity in calculating the carbon footprint.</p> <p>See UCC's annual sustainability report 2019-2020</p>	

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

Score explanation:

Guided by UCC's internal design policies and guidelines as well as current statutory building regulations the University requires that all new buildings and significant refurbishment projects meet the Near Zero Energy Building (NZEB), achieve a minimum Building Energy Rating of A3 and a classification of Excellent as per BREEAM standards.

See [UCC Building Design Policies](#)

See UCC's [ISO 50001 Certification and further details](#) on the campus' energy usage.

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

2	Yes, the medical school has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.

Score explanation:

UCC has not implemented any strategies to provide environmentally-friendly transport options for its students.

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

2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.

Score explanation:

The medical school has a recycling program in place, but minimal composting opportunities are available to staff and students on campus day-to-day.

See [UCC's annual sustainability report 2019-2020](#)

7. Does the medical school 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 adequate sustainability requirements for food and beverages, including meat-free days or no red-meat, and is engaged in efforts to increase food and beverage sustainability.
2	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is engaged in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is not engaged in efforts to increase food and beverage sustainability.
0	There are no sustainability guidelines for food and beverages.

Score explanation:

In 2016, UCC became the first University in Ireland to have fresh vegetables harvested from its own land and served its restaurants. The plot is managed by the family-owned “Waterfall Farms” who deliver the fresh produce to UCC’s catering company KSG. KSG has been awarded the highest accolade from the Sustainable Restaurant Association, a three star “Food Made Good” award.

UCC Green Campus, UCC Health Matters, and KSG run the “Meatless Mondays” series in the main campus restaurant during term time.

Across the campus, a phased approach is to be continued, including but not limited to bringing “front-of-house” plastic free approach to all cafes; expanding water fountain provision and improving existing fountains; completely eliminating plastic bottles sales from campus restaurants/ cafes/ shops; and eliminating single-use plastics from market stalls (policy updated Feb 2019).

See [UCC’s practises on food health policies](#)

8. Does the medical school or associated institution apply sustainability criteria when making decisions about supply procurement?

3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is engaged in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is not engaged in efforts to increase sustainability of procurement.
0	There are no sustainability guidelines for supply procurement.

Score explanation:

As UCC is a public body, all significant procurements are headed by the Irish States’ various public sector procurement procedures and regulations. However, UCC’s Procurement Office has introduced

criteria geared towards fulfilling sustainable practices of procurement. However, there is a lack of clarity on whether there are adequate requirements and timely reinforcements are in place.

See [UCC's annual sustainability report 2019-2020](#)

9. Are there sustainability requirements or guidelines for events hosted at the medical school?

2	Every event hosted at the medical school must abide by sustainability criteria.
1	The medical school strongly recommends or incentivizes sustainability measures, but they are not required.
0	There are no sustainability guidelines for medical school events.

Score explanation:

There are no sustainability requirements or guidelines for events hosted at the medical school. There are general recommendations under the 'green guidelines' resource page available for students to follow on UCC's sustainability website.

10. Does your medical school have programs and initiatives to assist with making lab spaces more environmentally sustainable?

2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.
1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are no efforts at the medical school to make lab spaces more sustainable.

Score explanation:

Sustainable Futures is a broader cross-university initiative implemented by UCC that serves to drive sustainability and decarbonization. UCC has been in the process of reviewing two primary accreditation systems available for greening laboratory practises, namely "My Green Lab," (a US based accreditation body) and the 'Laboratory Efficiency Assessment Framework (LEAF),' (developed by "Green Lab Associates" in the UK). Previously, UCC trialled the LEAF programme across several chemistry labs in the Kane building, and has now assembled the "Green Lab Community," which is composed of technical and research staff from throughout the University's research-intensive buildings & institutes. Two labs from each discipline will be selected to trial and identify which system works best for all research facilities across UCC. This system will hopefully be established via a whole-institution approach in the future.

See [UCC's annual sustainability report 2019-2020](#)

11. Does your institution’s endowment portfolio investments include fossil-fuel companies?

4	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.
3	No, the institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest, but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.

*Score explanation:
 UCC has divested from the fossil fuel industry a couple of years ago and is also a signatory, meaning the University is required to openly report on those ethical investments whose principles have been instrumental in large fund managers divesting of assets that are harmful to the environment and/ or undermine social justice.*

Section Total (out of 31)	18
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Grades and Trends

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 on the right.

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

Planetary Health Grades for University College Cork, School of Medicine

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

Planetary Health Grades from previous years (2021*) are compared with results from 2022.

Section	2021		2022	
	Raw Score	Grade	Raw Score	Grade
Planetary Health Curriculum (30%)	$(17/58) \times 100 = 29.31\%$	D	$(31/69) \times 100 = 44.93\%$	C-
Interdisciplinary Research (17.5%)	$(11/19) \times 100 = 57.89\%$	C	$(9/17) \times 100 = 52.94\%$	C
Community Outreach and Advocacy (17.5%)	$(6/14) \times 100 = 42.86\%$	C	$(5/14) \times 100 = 35.71\%$	D+
Support for Student-led Planetary Health Initiatives (17.5%)	$(7/15) \times 100 = 46.67\%$	C	$(8/15) \times 100 = 53.33\%$	C
Campus Sustainability (17.5%)	$(20/29) \times 100 = 68.97\%$	B	$(18/31) \times 100 = 58.06\%$	C+
Institutional Grade	46.66	C	48.49%	C

* Please note that since 2021, the metrics for the PHRC have been updated to better reflect current planetary health research; this is why the raw scores are not exactly comparable.