

Planetary Health Report Card (Medicine):

The University of Sydney



THE UNIVERSITY OF SYDNEY

2024-2025 Contributing Team:

- Students: Oliver Hervir, Louisa Leone, Fi Fraser
- Faculty Mentors: Prof. Margaret Schnitzler, A/Prof. Matti Gild

*Primary Contact: Oliver Hervir, oher2598@uni.sydney.edu.au

Land acknowledgment: The Sydney Medical Program Planetary Health Report Card team acknowledges the traditional owners of the land on which our university sits, the Gadigal people of the Eora nation. We acknowledge that traditional paradigms of Caring for Country both predate and intersect with Planetary Health, leaving much to be learnt from Aboriginal and Torres Strait Islander ways of being and knowing.

All named Faculty members have consented to being named in this document.

Summary of Findings

Overall Grade

Curriculum

- The curriculum is well-designed and covers various Planetary Health/ sustainability topics longitudinally, through a variety of modalities including lectures, tutorials, case-based learning, and co-designed podcasts. A recent project that involves students and staff co-record podcasts to address key recommendations of the Doctors for the Environment report "Mapping Climate Change and Health into the Medical Curriculum", has helped the University of Sydney score well in this section.
- **Recommendations**: Greater emphasis must be placed on the effects of anthropogenic toxins on reproductive health and local communities. Moreover, a key future step is to teach students different strategies for having conversations about climate change with patients.

Interdisciplinary Research

- A broad range of high-quality research into Planetary Health/ Sustainability is conducted at the University of Sydney, with several groups and multi-disciplinary collaborations.
- **Recommendations**: Mechanisms for community input into the research agenda must be strengthened. The website that centralises Planetary Health research findings must be updated more frequently.

Community Outreach and Advocacy

- At an institutional level, there is sufficient outreach to community members and organisations, including through a central website, and public seminar series.
- **Recommendations**: Resources that educate patients on climate change and environmental health exposures must be further developed and publicised. Even where they exist, they are not sufficiently easy to find.

Support for Student-Led Initiatives

- Both the University of Sydney and the School of Medicine offer support for students wanting to undertake sustainability initiatives, planetary health research, or other health equity-based initiatives. There are several student groups that interact with Planetary Health efforts, including GlobalHome, and the Gardening Society.
- **Recommendations**: Information about available supports is kept on a central webpage, but could be publicised better, and updated more frequently. Additionally, more cultural events and volunteering opportunities (e.g., to address anthropogenic environmental impacts locally) could be fostered both by the university and by interested student groups.

Campus Sustainability

- The University of Sydney is one of the world's most sustainable universities, as evidenced by its ambitious net zero plan, 100% renewable energy usage, sustainable building practices, recycling efforts, strategies promoting environmentally friendly transport, and guidelines for sustainable procurement and event catering.
- **Recommendations**: Whilst guidelines are strongly encouraged, they are not yet required. Ensuring that all events satisfy such guidelines will improve the campus' sustainability. Additionally, whilst the University has committed to divesting from fossil fuels, it has not yet fully completed this process.

A-

A

B

A-

A-

A

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

With the purpose of increasing planetary health awareness and accountability among health professional schools, we have created a Planetary Health Report Card that students internationally can use to grade and compare their institutions on an annual basis. 'This student-driven initiative aims to compare health professional schools nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) university support for student planetary health initiatives, 4) community outreach centred on environmental health impacts, and 5) 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 health professional education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term "planetary health" to satisfy the metric.
- Sustainable Healthcare: As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- Education for Sustainable Healthcare (ESH): is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
 - 1. Describe how the environment and human health interact at different levels.
 - 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
 - 3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- Medical School/Department vs. Institution: When "Medical school" is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when "institution" is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is specifically targeted for medical students, can meet this metric.

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

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

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

Planetary Health Curriculum

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

Curriculum: General

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?

Yes, the medical school has offered **more than one** elective whose primary focus is ESH/planetary health in the past year. (3 points)

Yes, the medical school has offered **one** elective whose primary focus is ESH/planetary health in the past year. (2 points)

The medical school does **not** have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a **lecture** on planetary health. (1 points)

No, the medical school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)

1

Score Assigned:

Score explanation: The Sydney Medical Program is a prescribed course with no opportunities for lecture-based electives within the curriculum or cross-enrolment at the institution (students can only undertake electives in certain clinical rotations). We have therefore graded the question based on courses available in other parts of the institution/ outside the institution to which medical students have access. For instance, in early 2024, the Year 3 Course Coordinator released an announcement sharing details for the <u>Doctors for the Environment Australia (iDEA)</u> 2024 conference, with a free two-day ticket later made available for any student who wished to attend. Additionally, in 2022, funding was provided by the medical school to support 5 students at USyd have the ability to attend a <u>Carbon Literacy Training course</u> offered by the university. We have thus awarded a score of 1.

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was not covered. (0 points)	
Score Assigned:	3

Score explanation: This topic is covered extensively throughout the curriculum. In Year 1 Cardiology block, students engage with curated readings (<u>Heart Failure and Thermoregulatory Control: Can Patients with Heart Failure Handle the Heat</u>) and a podcast that explores the link between heat exposure, stress, and cardiovascular risk. The material is also covered in a case-based learning tutorial where climate change/ environmental stressors intersect with traditional risk factors for non-communicable diseases like cardiovascular disease. During Year 1 Neurology block, students learn about the Uhthoff Phenomenon (which connects heat exposure to worsening symptoms in multiple sclerosis). The link between extreme heat and increased mental health presentations in Western Sydney emergency departments is also explored through a podcast ("Do hot days affect mental health ED presentations?").

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

This topic was explored in depth by the core curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in elective coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: In the Year 1 Respiratory, students are provided with a podcast ("Respiratory Health and the Environment") and lecture material that explores thunderstorms as a trigger for asthma and notes that such extreme weather events will become more frequent with climate change. Moreover, in the Year 1 Public Health seminar series, A/Prof Ying Zhang delivers a lecture ("Climate Change and Population Health") that discusses the physical and mental health impact of heat, floods and drought on individual health (direct excess mortality) and the healthcare systems (increased hospital admissions via direct and indirect (malnutrition, expanded vector distribution) methods). Another public health lecture ("Climate Change and Health") examines methods to build resilience within the healthcare system.

3

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

This topic was explored in depth by the core curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

 This topic was not covered. (0 points)

 Score Assigned:
 3

Score explanation: The Year 1 Population Health course covers this topic extensively, across several interactive forums, including Module 1 Forum 2 (Introduction to Communicable Disease Control) which explores the changing landscape of communicable disease control and the need for surveillance due to climate change, and Module 3 Forum 12 (One Health), which examines the root causes/ contributing factors of major global health challenges and their relationship with climate change. One example is the migration of malaria-carrying mosquitoes further south from the equator, toward Northern Australia. Each of the issues are discussed across several slides, making the connection to climate change abundantly clear.

1.5. Does your <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in elective coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: In Year 1 Respiratory block, air pollution is discussed throughout several lectures as a driver of worsening asthma and respiratory diseases. Students also complete a problem-based learning scenario focussed on chronic obstructive pulmonary disease, which has a discussion around air pollution built into it via the tutor guide. This topic is also covered through required readings (European Respiratory Society position statement on asthma and the environment). In a separate problem case, there is a similar tutor-mediated discussion around types of asthma inhalers, through the lens of sustainability. This topic is also explored through the aforementioned podcast "Respiratory Health and the Environment", co-recorded between academic staff and students.

3

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:	3

Score explanation: As described in question 1.2, this topic is covered through required readings and a podcast that explores both the physiological mechanism underpinning how heat stress increases cardiac presentations (by increasing the rate-pressure product and biochemically affecting mitochondrial proteins in heart muscle cells) and potential solutions that doctors can discuss with patients. Meanwhile, A/Prof. Zhang's lecture explores the epidemiological evidence of this phenomenon, through a series of <u>studies</u> she published on the 2009-10 Adelaide extreme heat events, which increased deaths, hospitalisations, and ambulance call-outs due to ischaemic heart disease in the elderly.

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

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: The Year 3 Psychiatry and Addiction Medicine term requires students to interact with several articles related to psychological distress due to climate change. There is also a lecture (with associated learning objectives) on eco-anxiety that specifically addresses how the ongoing stress of climate change, environmental degradation, and natural disasters impact on mental health. Moreover, a podcast ("Do hot days affect mental health ED presentations?") relates to this theme.

3

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

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in elective coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: Throughout the curriculum (especially in Year 1 Population Health and Infectious Disease teaching) students are exposed to the health impacts of food insecurity (malnutrition) and water insecurity (contamination with infectious agents like *V. cholera*) through several lectures.

However, these topics are covered less than previous topics and so a score of 2 is awarded. Students may also choose to complete a ward-based learning task that requires them to engage with an inpatient to assess how their nutritional needs are balanced alongside their economic and environmental considerations — this is optional.

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in elective coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: A/Prof. Ying Zhang's lecture ("Climate Change and Population Health") discusses how climate change exacerbates existing health inequity, with a particular focus on older adults, displaced populations, and low SES individuals. This topic was also explored during the Global Health teaching week in Year 2, through a lecture ("Contemporary Agenda in Global Health") that explores how the impacts of climate change accrue to certain disadvantaged populations (e.g., communities of colour). In the same week, students also discussed the topic in guided tutorial groups.

3

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in elective coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: A lecture ("Contemporary Agenda in Global Health") in Year 2 Global Health week also examines how particular regions of the world bear a disproportionate fraction of the health harms from climate change and environmental degradation. This discussion is in the context of an exploration of how these regions of the world are often excluded from Global Health decision making. Another Year 1 Public Health lecture ("Climate Change and Health") explores this topic too.

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

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

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: Not covered.

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

0

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in elective coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: This topic is explored briefly in a few lectures. For example, students learn about the impacts of bushfire smoke (which impacts many Australians, including in Sydney during the 2020 bushfires) on respiratory and cardiac health through the aforementioned lectures and podcasts. Students also learn about how some types of masonry are a risk factor for lung disease (silicosis) in a Public Health lecture called "Occupational Lung Disease". However, we score this outcome a 2 as there are additional topics that could be explored, such as water pollutants impacting fish in the Sydney Harbour, and the impacts of various industrial operations on local communities in Sydney.

2

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

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in elective coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: Within the general curriculum, there is a strong integration of the knowledge and values of Australia's First Nations (Aboriginal and Torres Strait Islander) people. This is reflected in the fact that 'Indigenous Health' is a specified vertical theme of the curriculum, with several associated lectures throughout all 4 years of the degree, and assessable learning outcomes. In addition to studying the health disparities facing Indigenous communities through a medical and Public Health lens, students benefit from a dedicated day in Year 1 and week in Year 2 to explore the Indigenous experience and perspective. Students experience a traditional smoking ceremony, complete a tour of Sydney Harbour with an Indigenous guide, and receive several talks from elders that explore Indigenous history (e.g., Stolen Generation) and values (e.g., connection to country, caring for land). Some clinical schools also teach yarning circles as a communication method.

2

In this context, students are serendipitously exposed to Indigenous knowledge and value systems that relate to Planetary Health. A key example is how the notion of 'caring for country' is deeply intertwined with Planetary Health. However, the practicalities of this link are not sufficiently explored, and hence we award a score of 2.

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?

This topic was explored in depth by the core curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in elective coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: A/Prof. Ying Zhang's lecture ("Climate Change and Population Health") discusses how particular disadvantaged groups (older adults, displaced people, low SES individuals) are disproportionately impacted by anthropogenic environmental toxins. A separate Public Health ethics lecture also explores the right to clean air and water, examining how certain communities are particularly impacted by such toxins. This same topic forms an assessment question for students, who must advise a patient with severe asthma who lives close to the Sydney airport and an exhaust stack for the M5 freeway tunnel, and plan how they would advocate to protect this community's health.

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

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in elective coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned: 2

Score explanation: This topic is briefly discussed in the aforementioned cardiology podcast (plantbased diets lower all-cause mortality in ischaemic heart disease patients) and in the Oncology block (meat eating may increase colorectal cancer risk), where the point is made that plant-based diets have less of a CO_2 burden. There is also a ward-based learning task (C3-38) that students may complete, which asks them to assess the nutritional value of a hospital meal, as well as its carbon footprint and possible methods for reducing it. Because this is only covered briefly, we have awarded it a 2.

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

Score explanation: In Year 1, students are introduced to the environmental impact of healthcare through public health studies, including the benefit of quantifying the carbon footprint of medical devices, medications, or other procedures as a standard means of comparison. In specific blocks, students explore the sustainability implications of specific healthcare practices, including the environmental impact of asthma inhalers, anaesthetic gases, or laboratory tests (such as a full blood count) in the Respiratory, Critical Care, or Haematology blocks respectively. This is taught through lecture material and reinforced in case-based tutorials. These are also learning outcomes that are commonly assessed in exams.

3

Students also engage in the 'Sustainability Challenge', a half-day interprofessional learning activity in Year 2, where they collaborate with other healthcare disciplines to produce an educational resource that explores various sustainability challenges and solutions. Students are also asked to consider the environmental impacts of lab tests through ward-based learning tasks (C2-17), and in investigation seminars.

As this information is distributed throughout the syllabus, the medical program developed a carbon footprint icon for the digital learning platform, that draws students' attention to this information.

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)	
The health and environmental co-benefits of avoiding over-medicalisation, over- investigation and/or over-treatment (2 points)	2
The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfil this metric. (2 points)	2
The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)	1
Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	1
The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	1
The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	1
Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	1

Score explanation: The following components are covered in the core curriculum:

- Students are exposed to the health and environmental risks of running unnecessary tests (e.g., the CO₂ emissions of a blood count, or an MRI) and using unnecessary treatments. There is also a dedicated video on low-value care, that underscores the dual environmental and clinical harm.
- Students are taught the importance of de-prescribing and rationalising medications through case studies. They work in an interprofessional team to develop an educational resource that explains how different professions can improve healthcare's sustainability. This team includes pharmacy students, and together students explore how pharmaceutical production, transport, waste, and over-prescribing can lead to climate and health harm.
- The health benefits of non-pharmaceutical management are drilled into students in virtually every class, for example the benefits of modifying diet, exercise, sleep hygiene, and tobacco/ alcohol use on hypertension, as well as various mental health conditions. Whilst not as widely discussed, the environmental co-benefits are also explored in various lectures, for example the cardiology podcast mentioned in 1.2, which examines the co-benefit of cycling to work. Students also learn from other healthcare professions in an interdisciplinary setting, such as physiotherapists (in the Healthcare collaboration challenge), about the environmental and

health co-benefits of early physiotherapy, which may reduce rehospitalisations and the need for pharmaceutical analgesia.

- A surgery video in Year 2 ("Low Value Care, A case-based scenario") explores the contribution of surgical healthcare to the climate crisis through the concept of avoiding over treatment and unnecessary tests.
- As per 1.16, the impact of anaesthetic gases is extensively discussed during the Critical Care term, with a particular focus on the fact that anaesthesia contributes 4-5% of the healthcare system's carbon footprint, mostly due to key volatile agents like nitrous oxide or desflurane. Students are taught that total intravenous anaesthesia (via propofol), particular volatile agents like sevoflurane, or even combined intravenous-volatile anaesthesia (which reduces the required dose of sevoflurane) can help to reduce this problem. It is a learning outcome for students undertaking this block.
- The respiratory podcast discusses this topic at length, including how to use a patient decisionaid on inhalers that considers the environmental impact of different inhalers.
- Clinical waste is explored throughout the syllabus, especially in surgery block, and in our procedural skills teaching, where strategies to mitigate waste production include re-using disposables for demonstration, and utilising expired products from the hospital. The production of waste (and use of water) from dialysis is also explored during the Renal block.

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?

Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)

Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)

No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)

0

Score Assigned:

Score explanation: Not covered.

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

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

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

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

Score Assigned:

Score explanation: Yes. A Population Health lecture ("Occupational Lung Disease") explores several strategies that can be used to take an occupational and environmental/ exposure history, including asking about job chronology, secondary jobs, hobbies, adjunctive factors, (historical) place of residence, sources of food/water, proximity to industrial zones, travel, and whether symptoms worsen at work/ during a hobby. Moreover, the lecture explores the need to ask about exposure to pesticides, asbestos, mould, smoke, and other forms of air pollution. This content is then reinforced through guided clinical tutorials, and in a clinical handbook provided to all students.

Curriculum: Administrative Support for Planetary Health

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

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

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

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

Score Assigned:

Score explanation: The university offers a course ("SDG Toolkit") for its professional staff that teaches them how to embed Sustainable Development Goals in the units of study they manage. In addition to this course, the medical school has specific faculty members overseeing the incorporation of planetary health (see 1.22), who are constantly improving planetary health education. Examples of recent improvements include: (1) co-designing a podcast series with students in response to the Doctors for the Environment Australia report "Mapping Climate Change and health into the Medical Curriculum"; (2) designing a planetary health icon on the online learning system to draw attention to planetary health teaching points; and (3) introducing new assessments that focus on planetary health and healthcare sustainability. Examples of the latter include the interprofessional learning activity mentioned in 1.16, questions in end-of-unit exams about the environmental impact of full blood counts (Yr 2 Haematology exam) or anaesthetic gases. (Yr 3 Critical Care exam), and questions in Population Health written assignments about the environmental impact of asthma puffers. These advances have all happened within the last year, and hence we award a score of 4.

4

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

Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)

Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)

Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s). (2 points)

There is **minimal/no** education for sustainable healthcare. (0 points)

Score Assigned:	6
-----------------	---

Score explanation: The various sustainable healthcare topics are integrated into the core curriculum very well. In Year 1, students spend 4-week blocks studying different fields of medicine (cardiology, respiratory, renal, etc) and planetary health content (including podcasts, readings, and lectures) is delivered in the appropriate blocks. There is also a year-long public health seminar series that touches on planetary health topics at various points through a lens of health equity and justice. Throughout Year 2, students continue to refine their knowledge of medical disciplines, while spending more time at placements. In addition to planetary health teachings that are still integrated, students are now exposed to the concept of healthcare sustainability through lectures and readings. Students receive a week of seminars on various Global Health topics (Global Health week), many of which discuss Planetary Health and the differential impacts of climate change and environmental degradation amongst different communities worldwide. Further teaching is likewise delivered during appropriate specialty rotations in Year 3 and 4 (such as the impact of anaesthetic gases in Critical Care, or of ecoanxiety during Psychiatry and Addiction Medicine). In summary, although not identified as a specific curriculum pillar, planetary health content is delivered as a core longitudinal theme across the 4 years of the Sydney medical program. There is a particular focus on Planetary Health during the first two years, which is consistent with the broader spiral learning approach used in the Sydney curriculum.

1.22. Does your <u>medical school</u> employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?

Yes, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)

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

Score Assigned:

Score explanation: Yes. Prof. Margaret Schnitzler (<u>margaret.schnitzler@sydney.edu.au</u>) and A/Prof. Matti Gild (<u>matti.gild@sydney.edu.au</u>) are the co-leads of the vertical theme "Planetary Healthcare" and lead the sustainable healthcare teaching into the curriculum. A/Prof Muh Geot Wong (<u>muhgeot.wong@sydney.edu.au</u>) is the Sydney Medical School Sustainability Lead.

1

Section Total (61 out of 72)

85%

Back to Summary Page here

Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>institution</u>?

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

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

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

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

3

Score Assigned:

Score explanation: Yes, there are several research groups at the institution which research such topics. These groups closely collaborate through the <u>Sustainability</u>, <u>Climate</u>, <u>and Health</u> <u>Collaboration</u>. Prominent researchers include <u>A/Prof. Ying Zhang</u> (who researches climate resilience, amongst several other elements of Planetary Health), and others (<u>1</u>) examining the effects of environmental exposures, air pollution and temperature on disadvantaged populations, or (<u>2</u>) leading a project called 'Reducing the healthcare system's carbon footprint' in conjunction with the Integrated Sustainability Analysis team at the <u>School of Physics</u>). There are several other researchers, and institutes that research planetary health and adjacent fields, including the: <u>Heat and Health</u> <u>Research Centre</u>, <u>Net Zero Institute</u>, and <u>Sydney Environment Institute</u>.

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

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

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

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

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

 Score Assigned:
 3

Score explanation: Yes. Currently, the <u>Sustainability</u>, <u>Climate</u>, <u>and Health Collaboration</u> functions as an institute that promotes interdisciplinary planetary health research. Whilst many of the researchers have a public health background, there is much collaboration with various other research institutes, government departments, industries, and professional organisations, including: (i) Centre for Air pollution, energy and health Research, (ii) Climate and Health Alliance, (iii) NSW Ministry of Health, (iv) University of Adelaide, and v) Lancet Countdown on Health and Climate. Preceding this initiative was the <u>Planetary Health Platform</u> launched in 2017, that also fostered interdisciplinary collaboration, as evidenced by the <u>3rd Global Soil Security and Planetary Health Conference</u>. Finally, the University of Sydney has a proud history of championing Planetary Health, as evidenced by the world's first appointment of a <u>Professor of Planetary Health</u>, whose role is to drive forward numerous Planetary Health initiatives at the university.

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

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

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

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

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

Score Assigned:

Score explanation: The University of Sydney is committed to soliciting input from interested communities regarding sustainability, as explicitly stated in the University's sustainability strategy: "[we aim to] partner effectively with people sand communities in urban, rural, and regional Australia and globally in co-created activities to deliver long-term sustainable benefits to us all". One example of this is the <u>Wiser Healthcare Group</u>, which is a multi-institutional collaboration that aims (amongst other goals) to produce an evidence base that helps clinicians and policy makers decarbonise healthcare and address overdiagnosis and overtreatment. They have consumer representatives and partners that help advise the direction of research. Since this initiative does not confer 'decision-making power', we have scored it a 2.

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

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

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

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

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

Score Assigned:

Score explanation: The <u>Sustainability</u>, <u>Climate</u>, <u>and Health Collaboration</u> website centralises ongoing and past research related to health and the environment, however it is not regularly updated, and doesn't fully encapsulate all the research occurring at the University of Sydney. There is a robust website for broader <u>Sustainability at Sydney</u>, but since this doesn't directly pertain to Planetary Health, we have scored this question a 2.

2

2.5. Has your <u>institution</u> recently hosted a conference or symposium on topics related to planetary health?

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

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

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

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

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

4

Score Assigned:

Score explanation: Yes, several conferences have been recently hosted:

- <u>2024 Earth System Governance (ESG) Forum</u> by Sydney Environment Institute
 <u>2024 Climate Change, Environment, and Cardiovascular Health Symposium</u> by
 - Cardiovascular Initiative

2.6. Is your <u>institution</u> a member of a national or international planetary health or ESH/ESV organisation?

Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 points)

No, the institution is **not** a member of such an organisation. (0 points)

Score Assigned:

Score explanation: Yes, the institution is a member of (i) the Global Consortium of Climate and Health Education, (ii) CAPHIA Climate and Public Health Education Network, and (iii) Climate Change & Health Special Interest Group within the Medical Deans of Australia and New Zealand.

1

Section Total (15 out of 17)

88%

Back to Summary Page here

Community Outreach and Advocacy

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

3.1. Does your <u>institution</u> partner with community organisations to promote planetary and health?

Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)

Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)

The institution does not partner with community organisations, but participates in community focused events relating to planetary health. (1 point)

No, there is **no** such meaningful community partnership. (0 points)

Score Assigned:

Score explanation: The University of Sydney meaningfully partners with multiple community organisations to promote planetary health.

3

- The <u>Sustainability</u>, <u>Climate and Health Collaboration</u> was established in late 2020 by the School of Public Health and has built partnerships with government departments, research institutes, industries and other organisations (e.g. Australian Prevention Partnership Centre, Climate and Health Alliance, Wellcome Trust etc).
- Established the <u>Wiser healthcare group</u> in collaboration with Bond University, Monash University and The University of Wollongong with a focus on reducing low-value care.

3.2. Does your <u>institution</u> offer community-facing courses or events regarding planetary health?

The institution offers community-facing courses or events at least once every year. (3 points)

The **institution** offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)

The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)

The **institution** has not offered such community-facing courses or events. (0 points)

Score Assigned:	3

Score explanation: The University regularly holds <u>events</u> open to the public centred on climate change and environmental sustainability, such as a visiting seminar on 'Advancing Global Health' with an environmental epidemiologist. The <u>Sustainability</u>, <u>Climate and Health Collaboration</u> also offers public events, such as annual forums which discuss recent research and activities in the field of climate science and explore ideas for collaborations geared toward climate change mitigation and adaptation. The Sydney Ideas flagship public talks program also regularly invites speakers related to public health, e.g. "*Oceanic narratives: Interweaving past, present and future*" (8 April 2024) which explored our climate future from a marine biology perspective, and "Animal Welfare, human wellbeing and planetary health" (28 August 2019).

3.3. Does your <u>institution</u> have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?

Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)

Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)

Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)

Score Assigned:

Score explanation: Yes, there is a dedicated Sustainability News and Events page with associated emails regularly sent to students updating them on sustainability initiatives around the University, and upcoming climate-related talks and events.

2

3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?

Yes, the **institution** or **main affiliated hospital trust** offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)

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

There are **no** such accessible courses for post-graduate providers. (0 points)

a		1
Score	Assign	ed:

Score explanation: There are multiple in-person or online courses relating to planetary health and/or sustainable healthcare. Specific examples:

2

- The University offers various micro-credentials and professional development courses related to planetary health, which can be taken individually or as part of a master's degree.

For instance, the "Net Zero Sprint" course is focused on building understanding of reporting business' carbon emissions and making the transition to net zero.

- Respiratory Net Zero leads undertook in-person education sessions for staff at Royal North Shore Hospital (major affiliated hospital) and ran webinars for the North Sydney Local Health District Primary Health Network (GPs in the local area) which included content about inhalers and the environment and the inhaler recycling initiative
- The University previously provided training sessions on climate and health to NSW Health, e.g. professional development course to Western Sydney LHD; capacity building sessions at international and national conferences for health professionals, e.g. the pre-conference course on Sustaining Health Through Climate Change, International Society of Physical and Rehabilitation Medicine (ISPRM) 2024; training sessions with health professional NGOs, e.g. Climate and Health Alliance workshops for health professionals, and delivered a session on 'Preparing health professionals for climate disaster preparedness and responses' at the Asian Society for Quality in Health Care (ASQua) 2022 World Health Day program.
- There is a course offered to staff and students entitled the 'Sustainable Development Goals (SDG) Toolkit' which helps provide strategies on embedding the SDG into curricula.
- A session co-led by Charles Perkins Centre Nepean and the Cardiovascular Initiative: 'Climate Change, Environment and Cardiovascular Health' was run in June 2024- it is in one of the clinical schools and was a symposium

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

Yes, the **institution** or <u>all</u> affiliated hospitals have accessible educational materials for patients. (2 points)

0

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

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

Score Assigned:

Score explanation: Not available.

3.6. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?		
Yes, the institution or <u>all</u> affiliated hospitals have accessible educational materials for patients. (2 points)		
Some affiliated hospitals have accessible educational materials for patients. (1 point)		
No affiliated hospitals have accessible educational materials for patients. (0 points)		
Score Assigned:	0	

Score explanation: Not available.

Section Total (10 out of 14)	71%
------------------------------	-----

Back to Summary Page here

Support for Student-Led Planetary Health Initiatives

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

4.1. Does your <u>institution</u> offer support for students interested in enacting a sustainability initiative/QI project?

Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects or sustainability QI projects are part of the core curriculum. (2 points)

The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)

No, the institution does not offer opportunities or support for sustainability initiatives or QI projects. (0 points)

Score Assigned:

Score explanation: The University of Sydney introduced a Sustainability Action grant which provides students with \$3000 funding and mentorship to design co-curricular projects centred around sustainability. (<u>link</u>).

2

4.2. Does your <u>institution</u> offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?

The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)

There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek these out and carry them out in their spare time. (1 point)

There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)

Score Assigned:

Score explanation: Third year students in the Sydney Medical Program are also invited on a yearly basis to do a MD project, a research project on QI/initiatives under the supervision of two academics. This is a 14-week project with dedicated time in the curriculum where the student performs a literature review and then develops a sustainability QI or research question and executes the development of content/evaluation in their selected planetary health field. For instance, in 2025, one third-year student is completing their MD project on the Incidence of Air pollution and vascular events in the NSW patient database.

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

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

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

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

2

Score Assigned:

Score explanation: The University of Sydney has a dedicated <u>Sustainability at Sydney</u>, as well as the <u>Sustainability</u>, <u>Climate</u>, <u>and Health Collaboration</u>. These contain information on current sustainability initiatives, student opportunities and grants, key contacts (e.g. sustainability team), and staff and student groups to join.

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

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

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

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

Score Assigned:

Score explanation: The University of Sydney has an active Gardening Society (Staff and students) and Sustainability Community of Practice Staff Group. There is a dedicated Sydney Medical School Sustainability Working Group with several student representatives, who receive active faculty support from academic staff and doctors at the affiliated teaching hospitals. A medical student group (<u>GlobalHome</u>), which focuses on health equity around the globe, also partially contributes to engagement with Planetary Health.

4.5. "Is there a student representative that serves on a department or institutional decisionmaking council/committee" [inferred]

Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)

No, there is no such student representative. (0 points)

Score Assigned:

Score explanation: As described in 4.4, there are student representatives on the Sydney Medical School Sustainability Working Group. There is also an elected Sustainability Representative in Sydney University Medical Society (SUMS) and in several of the clinical school societies, e.g. "RPASoc" (the society for students at Central Clinical School).

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)	
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.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	0
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
Score explanation: Evidence provided below.	

- The Green Impact Program is run across the university, with several teams of staff and students in the Sydney Medical Program (e.g., the Central Clinical School team). This challenges teams to complete practical sustainability-related initiatives that include preparing sustainable food items, and planting crops. There is also a 'Zero Waste Cooking Demonstration' open to students and staff, leaning how to make vegan cheese and other dishes using ingredients that are often thrown away.
- During the university-wide orientation week of Semester 2, 2024, there was a panel called "<u>Climate Conversations: Navigating Climate Anxiety</u>" intended for students (staff welcome too). It involved a talk from an expert, interactive activities, group discussions, action planning and resource sharing. The Sydney Environment Institute ran a panel series called "<u>Climate and Biodiversity Crises series</u>", featuring experts from academia, government,

business, and community. Finally, students could attend the event "<u>We can't save the</u> <u>climate by destroying nature</u>" during climate week in May 2024.

- In 2024, the Sydney Health Ethics Network held a screening of 'More Than a Fish Kill' which centred on the impacts of the 2019 and 2023 mass fish death events along the Barka/Baaka (Darling River) on Indigenous Australians' health and wellbeing. It was followed by a panel discussion which included an Indigenous Australian representative.
- No cultural arts events with planetary health as the major subject
- No volunteering specifically aimed at redressing anthropogenic environmental impacts

The University of Sydney has several student clubs focused on outdoor activities such as the Sydney University Bushwalkers Club, Sydney University Rock climbing and Mountaineering Club, and the Sydney University Speleological Society.

Section Total (12 out of 15)

80%

Back to Summary Page here

Campus Sustainability

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

5.1. Does your <u>institution</u> have an Office of Sustainability?

Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)

There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)

There are **no salaried sustainability staff**, but there is a sustainability task force or committee. (1 point)

There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)

Score Assigned:

Score explanation: Yes, the University of Sydney has Sustainability Program Control Board (PCB), established in 2023 (<u>Sustainability Strategy Annual Report 2023</u>, pg 47). They include a dedicated Sustainability Team. In 2023, the core Sustainability team expanded to include a Biodiversity Management Officer, Biodiversity Officer, Project Administrator, Sustainability Program Leads, a Data and Reporting Officer and a Change Manager. There is a Sustainability Working Group within the Faculty of Medicine and Health and appointed staff members at affiliated hospitals.

3

5.2. How ambitious is your institution's plan to reduce its own carbon footprint?

The institution has a written and approved plan to achieve carbon neutrality by 2030 (5 points)

The institution has a written and approved plan to achieve carbon neutrality by 2040 (3 points)

The institution has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate** (1 point)

The institution does **not** meet any of the requirements listed above (0 points)

Score As	signed:
----------	---------

31

Score explanation: We have an ambitious and clearly defined strategy (pg 22) including:

- Net Zero Scope 1 and Scope 2 Emissions by 2030
- Zero waste to landfill by 2030
- Directly support sustainability as one of the core foci in the research strategy of faculties and MDIs
- Support innovation and excellence in sustainability education
- Report annually to the University community and broader public during the life of this strategy

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

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

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

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

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

3

Score Assigned:

Score explanation: 100% renewable energy on the University campus.

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

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

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

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

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

Score Assigned:

Score explanation: The University of Sydney was rated among the world's most sustainable higher education institutes in 2022. As per the <u>Sustainability Strategy</u>, a minimum of 5 Star Green Star rating is required for all new buildings, and a 4 Star Green Star is required for any refurbishment projects in current buildings, noting that 100% of eligible buildings and core infrastructure are to be assessed by 2025. Several campus initiatives have included sustainable building practices, such as Solar-

powered (Gelion) benches installed near fields. A prominent example is the recent <u>Engineering and</u> <u>Technology Precinct Development project</u>, which includes energy-efficient lighting, improved indoor air quality features, a solar photovoltaic system on the room, and surface heat reduction conscious landscape design.

5.5. Has the <u>institution</u> implemented strategies to encourage and provide environmentallyfriendly transportation options for students and reduce the environmental impact of commuting?

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

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

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

2

Score Assigned:

Score explanation: The campus has dedicated bike parking and repair stations to encourage cycling. The university has (historically) built a pathway within its property to the nearest train station (Redfern) to encourage commuting by train. Moreover, there are very limited on-campus parking options, which discourages driving to campus. Environmentally friendly transport options are well-utilised by students.

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

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

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

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

Score Assigned:

2

Score explanation: Yes, there are recycling bins for non-organic recyclable waste (including aluminium, paper, plastic and glass). There is also a biodigester installed for odour-free processing of organic waste into compost for use on campus.

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

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

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

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

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

Score Assigned:

Score explanation: The university café prioritises recyclable food packaging and coffee cups and encourages the use of keep-cups to reduce waste. A sustainable events policy promotes practices such as undercatering to minimise food waste and avoid plastic packaging/ cutlery. Orientation programs have transitioned to entirely online to reduce resource consumption, and the campus supports a vegetarian policy to lower the environmental impact of its food offerings. A Sustainable Events document for all Sydney Medical School events has been prepared and suggests reusing name badges, promoting composting, and more.

3

5.8. Does the <u>institution</u> apply sustainability criteria when making decisions about supply procurement?

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

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

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

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

Score Assigned:

Score explanation: Sustainable, ethical, and socially responsible procurement is mandated in the Sydney Procurement Policy 2019. It states "When acquiring goods or services on behalf of the University, purchases must consider pollution control, waste minimisation; recycling and disposal; energy efficiency; resource consumption; demand management; adoption of environmentally sound technologies; and protection of biodiversity". One example within Sydney Medical School is the medical student scrubs, which are sourced from 'Sustainable Scrubs'

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

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

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

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

Score Assigned:

Score explanation: See 5.7. A Sustainable Events document for all Sydney Medical school events has been prepared and involves: promoting reused name badges, promote composting (etc) and is freely available. Medical students are not required to abide by this at the moment.

1

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

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

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

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

Score Assigned:

Score explanation: Yes, a project initiated by Sustainability at Sydney in 2023 led to several research groups participating in the My GreenLab Initiative in 2023: <u>https://www.mygreenlab.org/</u> and achieving Green level certification.

2

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

The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)

The institution is **entirely divested** from fossil fuels. (3 points)

The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)

The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)

Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)

Score Assigned:	2
-----------------	---

Score explanation: The University has committed to divesting from fossil-fuel and has partially done so, yet still retains some investments in fossil fuels. Much progress has been made, as the University's carbon footprint is the lowest it has been since it launched its carbon reduction strategy nearly 5 years ago. The 2020 Sustainability strategy aimed to "review the University's existing investment portfolio principles and strategy, drawing on expertise from our academic community as well as external investment best practice". In 2023, the investment team focused on extending the process of excluding non-compliant investments in pooled funds, in an attempt to meet the 2025 deadline early. Some pooled funds adopted the University's exclusion requirements. Those unable to meet the requirements have largely been sold. Consequently, the team expects to have met exclusion obligations by the end of the first quarter of 2024, two years early.

Section Total (29 out of 32)

91%

Back to Summary Page here

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	
А	80% - 100%	
В	60% - 79%	
С	40% - 59%	
D	20% - 39%	
F	0% - 19%	

Planetary Health Grades for the University of Sydney School of Medicine

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(61/72) x 100 = 85%	A-
Interdisciplinary Research (17.5%)	(15/17) x 100 = 88%	А
Community Outreach and Advocacy (17.5%)	(10/14) x 100 = 71%	В
Support for Student-led Planetary Health Initiatives (17.5%)	(12/15) x 100= 80%	A-
Campus Sustainability (17.5%)	(29/32) x 100 = 91%	А
Institutional Grade	(85x0.3 + 88x0.175 + 71x0.175 + 80x0.175 + 91x0.175) = 83%	А-