



Planetary Health Report Card (Medicine): *University of Newcastle and University of New England*



2024-2025 Contributing Team:

- Students: Shaila Dube*, Tara Tolhurst*
- Faculty Mentors: Dr Graeme Horton and Dr Susan Paul

*Primary Contacts:

University of Newcastle (UON): Tara Tolhurst, tara.tolhurst@uon.edu.au

University of New England (UNE): Shaila Dube, shaila.dube@uon.edu.au

Land acknowledgment:

The University of Newcastle acknowledges the traditional custodians of the lands within our footprint areas: Awabakal, Darkinjung, Biripai, Worimi, Wonnarua, and Eora Nations. We also pay respect to the wisdom of our Elders past and present.

“The University of New England respects and acknowledges that its people, courses and facilities are built on Anaiwan land, and surrounded by a sense of belonging, both ancient and contemporary, of the world's oldest living culture. In doing so UNE values and respects Indigenous knowledge systems as a vital part of the knowledge capital of Australia. We recognise the strength, resilience and capacity of the Aboriginal community and pay our respects to the Elders past, present and future.” [UNE Acknowledgment of Country](#)

Summary of Findings

Overall Grade	C+
Curriculum	B
<p>The Joint Medical Program (JMP) is established over two campuses (University of Newcastle (UON) and The University of New England (UNE)) and six clinical sites, which follow the same medical curriculum. Planetary health topics are introduced sequentially in the JMP, beginning in the first two years, followed by extensive exploration in the mandatory Year 3 Sustainable Healthcare Rotation. This rotation incorporates a range of learning activities, including mandatory readings, group discussions and pre-recorded lectures, which explores the anthropocene and mechanisms by which human health has been and is affected by environmental changes such as extreme weather events, epidemics, migration, and food and water security. While these topics are explored in this rotation, the absence of explicit references to some topics may make it difficult for students to fully appreciate the significance of these topics within the broader curriculum.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The JMP could consider explicit integration of the specific planetary health topics that aren't mentioned in the current curriculum into the learning framework as learning points • The introduction of additional elective modules or specialisation courses 	
Interdisciplinary Research	C-
<p>UON and UNE both have some engagement with planetary health research. UON has research groups like Environmental Plastic Innovation Cluster (EPIC), The Global Centre for Environmental Remediation, and the Centre for Water, Climate, and Land, while UNE has the One Health Policy. However, neither institution has an interdisciplinary department or institute dedicated to planetary health. UON has a general sustainability webpage that includes health-related research, but UNE has no such platform. The JMP has not hosted a planetary health conference in the last three years. The JMP is a member of the Global Consortium on Climate and Health Education and is represented in relevant health groups.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The Universities could establish dedicated interdisciplinary departments or research institutes for planetary health • The Universities could centralise all planetary health research within a single webpage/hub • The Universities could host more interdisciplinary planetary health events and seminars to foster collaboration and develop innovative solutions to tackling global planetary health challenges 	
Community Outreach and Advocacy	C-
<p>The university institutes and clinical sites offer some professional education activities, and affiliate with hospitals that provide patient information about environmental health exposures and the health impacts of climate change, but there are some gaps in other community outreach and advocacy areas such as partnerships and events.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The Universities and the JMP could investigate offering at least one community facing event or course per year, for example as part of the Looking Ahead Speaker Series, in collaboration with local groups such as Doctors for the Environment or Healthy Futures. 	

Support for Student-Led Initiatives	B
<p>The JMP has provided opportunities for interested students to engage in planetary health activities, including developing curriculum and assisting in research. The Universities that are a part of the JMP also foster student groups that are dedicated to planetary health and sustainable healthcare, and various co-curricular programs and initiatives related to the environment and health.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The JMP could facilitate opportunities for events in which students learn directly from members of local environmental justice communities about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts. 	
Campus Sustainability	B+
<p>The UON has made great progress towards becoming a more sustainable campus, including achieving carbon neutrality by 2025, being one of the first universities in Australia to achieve 100% renewable energy, and implementing robust environmentally friendly transport and recycling programs, among other initiatives.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • UON has already stated their intent to work on improving the environmental sustainability of lab spaces, and we encourage the pursuit of that goal alongside developing more sustainability requirements for events hosted at the institution that goes beyond the waste management practices. • UNE is committed to promoting environmental sustainability with a focus on ecologically sustainable development (ESD) and energy management. A range of projects are being implemented to reduce their environmental footprint, including smart energy solutions, infrastructure upgrades, sustainable land use practices, and sustainable motorised and non motorised transport provisions. 	

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 schools’ 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.
- **Extractivism:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to

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

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

Other considerations:

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

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

Planetary Health Curriculum

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

Curriculum: General

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health. (1 points)	
No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	0
<i>Score explanation:</i> Within the Joint Medical Program (JMP) there are no elective courses offered across the program due to the structure of the program. However, there are sustainable healthcare modules that are to be completed during the Sustainable Healthcare Rotation which all JMP medical students are required to complete in Year 3.	

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>The JMP addresses the relationship between extreme heat, health risks and climate change as part of one learning point in one mandatory lecture in the Year 1 core curriculum, and one learning point in Module 1 of the mandatory Year 3 Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies which facilitate discussion and reflection.</p>	

1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i></p> <p>The JMP explores the impacts of extreme weather events on individual health as part of one learning point in one mandatory lecture in the Year 1 core curriculum, and one learning point in Module 1 of the mandatory Year 3 Sustainable Healthcare Rotation. Further, the impacts of extreme weather events on healthcare systems is addressed in another learning point. This is in Module 2 of the Year 3 mandatory Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies that facilitate discussion and reflection.</p>	

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

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

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

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

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

Score Assigned:

2

Score explanation:

The JMP explores the impact of climate change on the changing patterns of infectious diseases as part of one learning point in one mandatory lecture in the Year 1 core curriculum, and one learning point in Module 1 of the mandatory Year 3 Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies that facilitate discussion and reflection.

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

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

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

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

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

Score Assigned:

2

Score explanation:

The JMP addresses the respiratory health effects of climate change and air pollution in the Year 3 Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies. For this measure, the topic is covered as part of the Module 1 mandatory reading:

- The Conversation article entitled "[Climate change is resulting in profound, immediate and worsening health impacts, over 120 researchers say](#)" briefly addresses respiratory health effects of climate change and air pollution
- '[Unprecedented smoke-related health burden associated with the 2019–20 bushfires in eastern Australia](#)' briefly addresses respiratory health effects of climate change and air pollution
- '[Unprecedented health costs of smoke-related PM2.5 from the 2019–20 Australian megafires](#)' briefly addresses respiratory health effects of climate change and air pollution

These readings are used to prompt discussion during mandatory tutorials where the topic of respiratory health effects of climate change and air pollution are further discussed.

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

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

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

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

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

Score Assigned:

2

Score explanation:

The JMP addresses the cardiovascular health effects of climate change, including increased heat, in the Year 3 Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies. The JMP briefly discusses cardiovascular health effects of climate change within the mandatory reading material of the Year 3 Sustainable Healthcare Module 1: Ecosystem Health:

- The Conversation article entitled "[Climate change is resulting in profound, immediate and worsening health impacts, over 120 researchers say](#)" briefly addresses cardiovascular health effects of climate change and air pollution
- '[Unprecedented smoke-related health burden associated with the 2019–20 bushfires in eastern Australia](#)' briefly addresses cardiovascular health effects of climate change and air pollution
- '[Unprecedented health costs of smoke-related PM2.5 from the 2019–20 Australian megafires](#)' briefly addresses cardiovascular health effects of climate change and air pollution

These readings are used to prompt discussion during mandatory tutorials where the topic of cardiovascular health effects of climate change are further discussed.

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

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

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

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

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

Score Assigned:

2

Score explanation:

The JMP addresses the mental health and neuropsychological effects of environmental degradation and climate change in the Year 3 Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies.

The JMP curriculum briefly addresses mental health effects of climate change and air pollution within the mandatory reading material of the Year 3 Sustainable Healthcare Module 1: Ecosystem Health:

- The Conversation article entitled '[Climate change is resulting in profound, immediate and worsening health impacts, over 120 researchers say](#)' briefly addresses mental health effects of climate change and air pollution
- '[Unprecedented smoke-related health burden associated with the 2019–20 bushfires in eastern Australia](#)' briefly addresses mental health effects of climate change and air pollution
- '[Unprecedented health costs of smoke-related PM2.5 from the 2019–20 Australian megafires](#)' briefly addresses mental health effects of climate change and air pollution
- 'The Australian Psychological Society has developed a resource to help people cope with the psychological impacts of the longer term threats posed by climate change entitled '[Coping with Climate Change Distress](#).'

These readings are used to prompt discussion during mandatory tutorials where the topic of mental health and neuropsychological effects of environmental degradation and climate change are further discussed.

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

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

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

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

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

Score Assigned:

2

Score explanation:

The JMP explores the relationships between health, individual patient food and water security, ecosystem health and climate change as part of one learning point in one mandatory lecture in the Year 1 core curriculum, and one learning point in Module 1 of the mandatory Year 3 Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies that facilitate discussion and reflection.

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

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

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

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

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

Score Assigned:

2

Score explanation:

The JMP addresses the outsized impact of climate change on marginalised populations as part of one learning point in one mandatory lecture in the Year 1 core curriculum, and one learning point in Module 1 of the mandatory Year 3 Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies that facilitate discussion and reflection.

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

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

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

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

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

Score Assigned:

2

Score explanation:

The JMP explores the unequal regional health impacts of climate change as part of one learning point in one mandatory lecture in the Year 1 core curriculum, and one learning point in Module 1 of the mandatory Year 3 Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies that facilitate discussion and reflection.

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:	0
<p><i>Score explanation:</i> The JMP does not have any specific learning objectives or lectures addressing the reproductive health effects of industry related environmental toxins, but rather it is casually spoken about in lectures by the lecturers.</p>	

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> The JMP addresses the important human-caused environmental threats that are relevant to the universities' surrounding community throughout the mandatory Year 3 Sustainable Healthcare Rotation. Modules in this rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies that facilitate discussion and reflection. In these modules there is also a strong focus on what the local health district, Hunter New England Health, is doing, which encompasses the geographical locations of the University of Newcastle (UON) and the University of New England (UNE) and the surrounding communities. There is also a prerecorded zoom lecture from October 2022 in Module 2 of the Year 3 Sustainable Healthcare Rotation called 'Delivering Change in Healthcare,' that was presented by the Executive Director of Infrastructure, Planning and Sustainability of Hunter New England Health at the time, which explores particular Hunter New England Health sustainability endeavours and goals. However, there is no specific learning point in the curriculum to address this topic.</p>	

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

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

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

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

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

Score Assigned:

2

Score explanation:

The JMP provides one pre-recorded lecture as part of Module 1 of the Year 3 Sustainable Healthcare Rotation that emphasises the importance of Indigenous knowledge and value systems as essential components of planetary health solutions. This lecture is from an expert from Monash University given for the Hunter Branch of The Royal Society of NSW on the 2nd of December 2020. It acknowledges the Indigenous understanding of planetary health and emphasises the importance of the Indigenous voice in solutions to the impacts of climate change. While this is only a pre-recorded lecture, and hence offers minimal opportunity for open discussion or reinforcement for education, it is still a valuable part of the module.

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

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

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

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

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

Score Assigned:

2

Score explanation:

The JMP addresses the outsized impact of anthropogenic environmental toxins on marginalised populations as part of one learning point in one mandatory lecture in the Year 1 core curriculum, and one learning point in Module 1 of the mandatory Year 3 Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies that facilitate discussion and reflection. Further, the JMP provides one pre-recorded lecture as part of Module 1 of the Year 3 Sustainable Healthcare Rotation that acknowledges the impact of anthropogenic environmental toxins on marginalised populations. This lecture is from an expert from Monash University given for the Hunter Branch of The Royal Society of NSW on the 2nd of December 2020.

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored in depth by the core curriculum. (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
<i>Score explanation:</i> The JMP addresses the environmental and health co-benefits of a plant-based diet in Module 2 of the mandatory Year 3 Sustainable Healthcare Rotation. This module includes learning activities such as engagement with provided videos, academic commentary pieces, websites, and journal articles, including the following further optional reading: ' Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems .' There is also a mandatory online tutorial with case studies which facilitate discussion on this topic. Students often choose to discuss this topic as part of their engagement with this module.	

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:	2
<i>Score explanation:</i> The JMP addresses the carbon footprint of healthcare systems as part of one learning point in one mandatory lecture in the Year 1 core curriculum, and one learning point in one module in the mandatory Year 3 Sustainable Healthcare Rotation. Modules in the Sustainable Healthcare Rotation include learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies that facilitate discussion and reflection.	

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	Score
The health 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
<p><i>Score explanation:</i></p> <p>The JMP addresses all of the various components of sustainable clinical practice listed above in mandatory Year 3 Sustainable Healthcare Rotation. This rotation is split into modules, with each module including learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies that facilitate discussion and reflection. While some of these topics are covered in learning points, others are not but are still incorporated into the modules through the various aforementioned activities.</p>	

Curriculum: Clinical Applications

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

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

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

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

Score Assigned:

2

Score explanation:

As part of the mandatory Year 3 Sustainable Healthcare Rotation, the JMP provides students with tasks to consider how information about the health effects of climate change would be best delivered to patients. This includes patient case studies that are discussed during the small group tutorials that are held for each module where students need to consider how to address the concerns of patients regarding physical and mental health in relation to climate change, such as in the context of extreme weather events. However, there are currently no learning points in the curriculum that cover strategies that may be utilised within patient encounters to address the health effects of climate change.

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

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

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

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

Score Assigned:

0

Score explanation:

In the JMP, strategies for taking environmental or exposure history are covered in communication skills sessions in Y1-Y3. However, there is official mention of this in learning frameworks, course content or lecture slides.

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:	2
<i>Score explanation:</i> In the JMP, current work is being done to liaise within and outside of the organisation to update and improve content around planetary health education within the 1st, 3rd and 5th year programs.	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
Planetary health/ESH topics are well integrated into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) . (2 points)	
There is minimal/no education for sustainable healthcare. (0 points)	
Score Assigned:	4
<i>Score explanation:</i> Planetary health is first introduced in year 1 as part of core content of a mandatory lecture and continued in year 3 through modules of a mandatory Sustainable Healthcare Rotation. The majority of planetary health content is learned in mandatory Year 3 Sustainable Healthcare four week online rotation for all students that includes weekly mandatory tutorials. Core content for this rotation includes learning activities such as engagement with provided videos, academic commentary pieces, websites, journal articles and a mandatory online tutorial with case studies. There is also a General Practice assignment on health policy development in Year 5. Finally, topics related to planetary health and sustainable healthcare are sometimes covered within other lectures and learning points (see Measure 1.11 for an example for how industry related environmental toxins can affect reproductive health is covered in the Year 4 Obstetrics and Gynecology Rotation). While the content is covered within the core curriculum, the planetary health/ESH topics lack coherent integration into the curriculum.	

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

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

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

Score Assigned:

1

Score explanation:

The JMP Head of General Practice & Primary Care and Theme Lead for Health Societies and Environment Dr Graeme Horton - University of Newcastle School of Medicine and Public Health - specifically oversees and takes responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course. He has a Masters of Environmental Studies and a PhD in the incorporation of the topic of climate change health impacts into the medical school curriculum.

Section Total (47 out of 72)

65.28%

Back to Summary Page [here](#)

Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <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)	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>At UON, there is at least 1 staff member that has a primary research focus in planetary health and/or sustainable healthcare, and there are various other individual faculty members that have conducted/are conducting research related to climate change and health but it is not their primary research focus.</p> <p>At UNE, there is at least one staff member that has a primary research focus in planetary health and/or sustainable healthcare and there are various individual faculty members and research groups that have conducted/are conducting research related to planetary health and environmental sustainability but it is not their primary research focus.</p>	

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

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

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

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

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

Score Assigned:

1

Score explanation:

At UON and UNE, there are various research groups that cover occupational and environmental health, but no specific interdisciplinary departments or institutes for planetary health research. At UON, these include the [Environmental Plastic and Innovation Cluster \(EPIC\)](#), the [Global Centre for Environmental Remediation \(GCER\)](#) and the [Research / CWCL - Centre for Water, Climate and Land / Institutes and centres / Research / The University of Newcastle, Australia](#).

UNE has several research initiatives and groups that focus on occupational and environmental health, yet there is no specific interdisciplinary department or institute dedicated to planetary health research. UNE has a strong focus on environmental sustainability through the UNE School of Environmental and Rural Science.

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

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

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

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

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

Score Assigned:

2

Score explanation:

As part of the Centre International de Formation des Autorités et Leaders (CIFAL), a United Nations (UN)/UNITAR International Training and Outreach Centre, [CIFAL Newcastle](#) is dedicated to supporting and promoting progress towards the UN's 17 Sustainable Development Goals (SDGs). By facilitating training programs, CIFAL Newcastle empowers individuals, communities, governments, and organisations to address development challenges effectively, ensuring that the

voices of those most affected by climate change and environmental injustice are integrated into the decision-making process.
UNE was unable to provide any information on this metric.

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

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

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

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

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

Score Assigned:

1

Score explanation:

The UON has several sustainability webpages with a [centralised sustainability landing page](#) that includes all the information related to the University's work related to the environment and sustainability with references to health where relevant. This includes the Universities' goals, initiatives, and focus areas, as well as sections for news, events and options for study. The webpage also has a subsection on the research focus areas in the sustainability space, including health-related research projects. As the centralised webpage covers a broad range of topics related to all of the institution's sustainability activities with only brief mentions of health-related topics, the score of 1 is most appropriate.

There is no website that centralises ongoing and past research related to health and the environment at UNE.

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

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

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

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

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

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

Score Assigned:	0
<p><i>Score explanation:</i></p> <p>As a combined institution the Joint Medical Program (JMP) has never hosted a conference or symposium for medical students addressing the topics of <i>planetary</i> health.</p> <p>UON has not hosted a conference or symposium on topics related to planetary health within at least the past three years, and information was not accessible regarding any financial support that may have been provided for a local planetary health events.</p> <p>The last related event was a lecture to be conducted at the Hunter Branch of the Royal Society of NSW on ‘ Planetary Health: Safeguarding Health in the Anthropocene Epoch’ which was scheduled to be held on Wednesday the 25th of March 2020 in person, but was changed to an online event.</p> <p>The UNE has not hosted a conference or symposium on topics related to planetary health within at least the past 3 years. Each year, the university Clubs and Societies committee funds Green Week run by <i>ASPIRE (Armidale Students Promoting International Rights and Equality)</i> which advocates for environmental sustainability and planetary health.</p>	

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:	1
<p><i>Score explanation:</i></p> <p>The JMP is a member of the Global Consortium on Climate and Health Education. The Theme Lead for Health Societies and Environment Dr Graeme Horton also represents the JMP on the Climate Change and Health Special Interest Group Meeting of Medical Deans Australia and New Zealand and is the Chair of the Planetary Health Hot Topic Action Group of Australia and New Zealand Association of Health Professional Educators.</p>	

Section Total (7 out of 17)	41.18%
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Back to Summary Page [here](#)

Community Outreach and Advocacy

Section Overview: 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:	0
<i>Score explanation:</i> There is no information available on if the University of Newcastle (UON) or University of New England (UNE) partner with community organisations to promote planetary health.	

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:	1
<i>Score explanation:</i>	

UON does not offer community-facing courses or events regarding planetary health. There was an event which was meant to be in person in March 2020, but was changed to be online on the '[Planetary Health: Safeguarding Health in the Anthropocene Epoch - Hunter Branch of the Royal Society of NSW Meeting](#).' The lecture has since been accessed by four JMP cohorts.

3.3. Does your institution 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:

0

Score explanation:

The JMP students do not receive communications about planetary health or sustainable healthcare regularly or specifically enough for this measure to be awarded points.

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

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

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

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

Score Assigned:

1

Score explanation:

At UON, The School of Medicine and Public Health offers postgraduate coursework that includes content on environmentally sustainable healthcare. These include the elective courses [PUBH6304 - Global Health](#) and [SOCA6590 - Environmental Justice](#) which are covered in programs such as the Graduate Certificate in Clinical Epidemiology, Graduate Certificate in Public Health, Master of Clinical Epidemiology and Master of Public Health.

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 all affiliated hospitals have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> The New South Wales Health Department governing the JMP affiliated teaching hospitals provides community fact sheets on environmental health exposure at all the clinical sites.	

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 all affiliated hospitals have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> The New South Wales Health Department governing the Joint Medical Program affiliated teaching hospitals provide educational materials on the health impacts of climate change.	

Section Total (6 out of 14)	42.68%
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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 <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum. (2 points)	
The institution encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate. (1 point)	
No, the institution does not offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i></p> <p>The JMP offers ways to get involved in sustainability projects, particularly through collaboration with a local clinical school hospital's Green Operating Theatre (OT). This provides opportunities to engage in projects such as:</p> <ul style="list-style-type: none"> • Segregating clean waste in OT into appropriate waste or recycling streams, • Ongoing documentation and tabulation of clean plastics to determine their specific types and recyclability, • Auditing of use of nitrile non-sterile clinical gloves in OT + comparison with guidelines, • Auditing of use of "Blueys" (incontinence sheets), • Auditing of single-use consumables that are opened but unused (as part of or independent of Multigate custom packs), • Auditing of the use of suction apparatus and canisters in OT (how much fluid collected, use by surgical AND anaesthetic teams, etc.), • Working with interns on audit and tracking of single-use tourniquets 	

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

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

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

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

Score Assigned:

1

Score explanation:

The JMP offers some opportunities for interested students to assist in research related to planetary health upon expression of interest.

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

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

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the 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)

Score Assigned:

1

Score explanation:

There is no institution specific webpage for locating planetary health and/ or sustainability healthcare projects or mentors at University of Newcastle (UON) or University of New England (UNE). However, there are web pages that showcase climate change and sustainability initiatives across the universities that may include related planetary health and/or sustainable healthcare projects, including the UON [sustainability](#) webpage and [research centre directory](#). Additionally, there are staff directories that, via keyword searches, can be used to find potential mentors within the institutions.

While not specific to healthcare, the following websites highlight broader climate change and sustainability initiatives websites:

- [Sustainable Cities and Communities](#)
- [Building a sustainable future](#)
- [Explore our Research Centres](#)

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

Yes, there is a student organisation **with faculty support** at my 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:

2

Score explanation:

At UON there is a student group dedicated to planetary health and sustainability in healthcare, the club '[Doctors for the Environment UON](#)', that is supported by faculty.

UNE no longer has a Doctors for the Environment (DEA) Group (since 2023). However in 2024, [ASPIRE](#) created a Doctors for the Environment Student UNE Representative position to liaise with the [DEA National Student Committee](#). ASPIRE also has 2 [Australian Medical Students Association Code Green](#) representatives that engage in advocacy within the University and broader community on issues and topics related to the environment, climate change and health.

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

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

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

Score Assigned:

1

Score explanation:

The UON has an [Environmental Sustainability Committee](#) made up of members from across the University, including from teaching and research areas, that includes two students as members. In the past the Joint Medical Program (JMP) has also offered the opportunity for interested students to assist in developing curriculum on environmentally sustainable healthcare.

UNE has a [sustainability committee](#) that oversees the implementation of sustainability across the academic, recreational and residential facilities. However, UNE does not have a known student liaison representing sustainability interests.

4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	Score
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	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.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
<p><i>Score explanation:</i></p> <p>UON has a Community Garden Program Community Garden / Initiatives / Sustainability / Our Uni / The University of Newcastle, Australia.</p> <p>The JMP interdisciplinary panel discussions that occur for Year 3 students three times per year mostly have a planetary health component.</p> <p>At UNE, staff have been involved in local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.</p> <p>The UON supports multiple student-run clubs that organise wilderness or outdoor programs for students, including Newcastle University Mountaineering Club and the Newcastle University Student Environment Club.</p>	
Section Total (10 out of 15)	66.67%

Back to Summary Page [here](#)

Campus Sustainability

Section Overview: This section evaluates the support and engagement in sustainability initiatives by the institution. The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our institutions, 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:	2
<p><i>Score explanation:</i></p> <p>The Infrastructure Facilities and Services group has a dedicated Sustainability Manager who coordinates activities to progress our achievement of the Environmental Sustainability Plan 2019-2025 goals. The Sustainability Manager is assisted by experts in various areas from across the University. The Environmental Sustainability Committee provides the organisational oversight of the Environmental Sustainability Plan 2019-2025 and consists of members from across the University including teaching and research areas.</p> <p>Despite University of New England's (UNE's) commitment to environmental management in operations, teaching, research and infrastructure, there is no designated office of sustainability.</p>	

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 Assigned:

5

Score explanation:

The University of Newcastle (UON) has committed in their [ENVIRONMENTAL SUSTAINABILITY PLAN 2019–2025](#) to achieve carbon neutrality by 2025. Priority actions and measures of success have been outlined within the 'Energy and Carbon' section of the plan. UNE has always been very proactive in safeguarding the distinct [natural environmental and cultural heritage of regional and rural communities](#). The '[Project Zero 30](#),' is a collaborative initiative involving the Armidale Regional Council, UNE, Business New England, Local Land Services and the broader Armidale community that focuses on addressing sustainability, the environment and climate related challenges to reach the goal of reducing carbon emissions to zero by the year 2030.

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

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

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

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

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

Score Assigned:

3

Score explanation:

In 2018, UON [signed an agreement with Red Energy](#) to provide 100% renewable energy for the Callaghan and Central Coast campuses. This seven-year contract demonstrates the ongoing commitment of the institution to be at the forefront of the renewables industry and they proudly became one of the first universities in Australia to achieve 100% renewables. In 2022, UON installed electric vehicle charging stations on campus, utilising Red Energy renewables supply. They now have 14 active ports, recharging public user cars and the 15 electrical vehicles in the UON fleet. UNE has made significant strides in using [renewable energy](#) across its infrastructure. In September 2020, UNE completed a solar farm construction project that now provides 50% of the Armidale Campus' electricity and 30% of the overall campus, reducing carbon emissions by up to 5,000 tonnes annually. The sports UNE aquatic centre uses geothermal heating and employs energy monitoring tools to optimise energy consumption, further supporting sustainability efforts.

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

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

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

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

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

Score Assigned:

2

Score explanation:

Where possible, the UON plans to achieve five-six star energy ratings for all new capital projects across their campuses – [the Q building in Newcastle City is an award-winning 6 star building](#). New buildings planned at Callaghan and Gosford are all scoped to be built to six star rating. For older buildings, the UON recycles building materials where possible. When the McMullin building was demolished, the UON achieved an over 85% recycling rate of all building materials.

UNE integrated sustainable building practices into both new and existing infrastructure. A [Campus Master Plan \(2017- 2035\)](#) emphasises the unification of the Armidale Campus that is focused on environmentally sustainable designs across academic, residential, commercial and sporting precincts.

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

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

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

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

Score Assigned:

2

Score explanation:

The UON has installed dual [electric vehicle charging](#) stations in central parking bays across campuses for student, staff and visitor use (powered by 100% renewable sources through the institution's electricity supplier Red Energy).

There is a [shuttle bus service](#) that runs between the inner and outer city campuses on a 30 minute frequency during semester. There is another shuttle that operates between one of the UON campuses and one of the clinical schools, and there is a bus shuttle that runs between the campus and the closest train station for that campus. Students are also provided with information about [bus routes](#) that run from multiple on- or off-campus locations to local clinical schools.

Further, UON has secure [Bike Hubs](#) for staff and students at multiple campuses, as well as bike racks throughout multiple campuses for staff, student and visitor use, with numerous on and off road bike paths connecting the main campus to the surrounding city area. There is also a [train](#) station located on the main campus. Finally, the UON offers free exclusive parking spaces for people engaging in ridesharing or carpooling through the app [Liftango](#).

UNE has progressively upgraded its [campus road network](#) to address traffic congestion and simultaneously updated [infrastructure](#) to support non motorised travel such as walking and cycling paths. Additionally the provision of a shuttle bus helps reduce car usage. UNE has also collaborated with private and regulatory bodies to allow further provisions of sustainable transportation options for students and staff.

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

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

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

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

Score Assigned:

2

Score explanation:

The UON has an organics recycling program and a conventional recycling program, and they are continuing to build their waste diversion practices. They recycle all bottles, cans, glass, cardboard and paper through recycling bins across campus. Their green waste program has been launched across campuses as well, diverting all organic waste from landfill. They have clothing bins located at key locations at Callaghan and Ourimbah and have just started launching their [return and earn facility at Callaghan](#). Their community garden also accepts compost donations. As they have identified the significant burden coffee cups have on our landfill facilities, they have partnered with [Simply Cups](#) to provide a coffee cup recycling service, located near all our coffee vendors at both campuses. Their soft plastic program collects and processes soft plastics to pellets which can be used back on campus to create benches, bump stops in car parks, bollards and other furniture.

UNE has developed a [Waste Minimisation Strategy \(2023- 28\)](#) to reduce its environmental impact by focusing on waste avoidance, reduction, reuse and recycling through education, better resource management and enhanced recycling infrastructure. Aligned with the United Nations Sustainable Development Goals (SDGs), UNE set targets are to reduce overall waste by 10%, increase recycling to 50% and compost to 25% by 2028. Integrating sustainability into campus operations include sustainable food packing and expanded recycling programs.

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

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

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

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

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

Score Assigned:

2

Score explanation:

UON works closely with all vendors and campus partners and encourages them to be responsible in their service delivery. Their lease agreements specifically request that the vendor must observe and comply with the sustainability requirements of the university.
Unfortunately no information was retrievable from UNE on this measure.

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

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

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

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

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

Score Assigned:

3

Score explanation:

UON has embedded sustainability in their procurement documents so that their suppliers and contractors participate in sustainability- first approaches. Actions related to applying their sustainability criteria when making decisions about supply procurement will ramp up in 2025 as they continue to work on their scope 3 emissions reporting requirements. In 2022, they reviewed the fleet vehicle procurement policy and established electric first when procuring new vehicles for their fleet. Their supplier for the NUspace shuttle has procured hybrid buses under the requirements set down in the contract with Port Stephens Coaches (the current provider).
Unfortunately no information was retrievable from UNE on this measure.

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:

1

Score explanation:

The UON requires all events to comply with the waste management practices already established in the institution and for the event organisers to ensure all waste is diverted to proper channels. They also encourage event organisers to reduce waste from packaging, use recyclable single-use plates and cutlery, use supplied recycling bins, look at ways to avoid excess paper (e.g. not giving out flyers or excess giveaways that get discarded) and providing places to refill water bottles.

Unfortunately no information was retrievable from UNE on this measure.

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

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

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

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

Score Assigned:

1

Score explanation:

In addition to their waste diversion and procurement practices, TheUON diverts all metal to recycling companies where possible, including when they dispose of large pieces of equipment. They will be working with lab partners to reduce lab wastage more in 2025.

Unfortunately no information was retrievable from UNE on this measure.

5.11. Does your <u>institution's</u> 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		
<p><i>Score explanation:</i></p> <p>The UON has committed to the following outcomes under the Environmental Sustainability plan 2019-2025:</p> <ul style="list-style-type: none"> • Improve the ESG score of our investment portfolio by 20-30% by 2020, based on a 2017 baseline. • Reduce the carbon footprint of our share portfolio by 20% by 2020, based on a 2016 baseline. • Divesting from fossil fuel companies that don't meet their requirements for managing the transition to a low carbon economy by 2020. • Invest 10% of the portfolio (or approximately \$50 million) in investments aligned with the UN Sustainable Development Goals (SDGs) by 2020. 			
<table border="1"> <tr> <td>Section Total (25 out of 32)</td><td>78.13%</td></tr> </table>		Section Total (25 out of 32)	78.13%
Section Total (25 out of 32)	78.13%		

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

Planetary Health Grades for the Joint Medical Program UON and UNE

The following table presents the individual section grades and overall institutional grade for the Joint Medical Program UON and UNE on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(47/72) \times 100 = 65.28\%$	B
Interdisciplinary Research (17.5%)	$(7/17) \times 100 = 41.18\%$	C-
Community Outreach and Advocacy (17.5%)	$(6/14) \times 100 = 42.86\%$	C-
Support for Student-led Planetary Health Initiatives (17.5%)	$(10/15) \times 100 = 66.670\%$	B
Campus Sustainability (17.5%)	$(25/32) \times 100 = 78.13\%$	B+
Institutional Grade	$(A \times 0.3 + B \times 0.175 + C \times 0.175 + D \times 0.175 + E \times 0.175) = 59.63\%$	C+