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# Planetary Health Report Card (Medicine): *St. John's Medical College, Bengaluru*

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2023-2024 Contributing Team:

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## Summary of Findings

Overall	C
<u>Curriculum</u>	C
<ul style="list-style-type: none"> <li>St John’s Medical College (SJMC) has made efforts to integrate planetary health into the curriculum through the ‘Citizen Doctor’ program, the introduction of electives on planetary health, various lectures on “Environment and Health” and outreach programmes. However, further efforts can be made to integrate more topics and to holistically cover planetary health.</li> <li><b>Recommendations:</b> Recommendations include integrating climate change and planetary health into relevant subjects and expanding to encompass a broader spectrum of topics. For instance, the Department of Pharmacology could address the environmental impacts of pharmaceuticals and inhalers and during clinical postings, students should be trained in engaging patients in planetary health conversations.</li> </ul>	
<u>Interdisciplinary Research</u>	C -
<ul style="list-style-type: none"> <li>SJMC has conducted many seminars on planetary health. Continued efforts are being made to organise more in the forthcoming years. There are also a significant number of ongoing planetary health-related research projects taking place in the institution.</li> <li><b>Recommendations:</b> There could be more participation from students and faculty at SJMC. A proper website and joining a planetary health organisation would not only help students to get updates on various seminars but also help the ones who wish to enhance their research knowledge about planetary health.</li> </ul>	
<u>Community Outreach and Advocacy</u>	C
<ul style="list-style-type: none"> <li>SJMC exhibits commendable community outreach efforts, yet there exists a notable gap in integrating planetary health and sustainable healthcare into its programs. Notably, the college excels in engaging rural communities, evident through initiatives like community health awareness and rural orientation programs.</li> <li><b>Recommendations:</b> Recommendations include formalising the inclusion of Ecologics (the college sustainability club) activities in the college update communication, establishing long-term partnerships with community organisations for large-scale events, and providing patient education materials through hospital notice boards or digital displays.</li> </ul>	
<u>Support for Student-Led Initiatives</u>	B
<ul style="list-style-type: none"> <li>SJMC supports student planetary health initiatives through the Department of Health and Humanities. Ecologics, the eco-club, coordinates and organises student-led events to promote sustainability on campus. SJMC also recognizes and supports students’ interests in pursuing research related to planetary health.</li> <li><b>Recommendations:</b> SJMC should create a regularly updated and accessible webpage for students to connect with supervisors and peers for planetary health projects. It should also document events, projects, and future goals on this webpage. SJMC can collaborate with sustainability-driven organisations off campus to help students understand real-world challenges.</li> </ul>	
<u>Campus Sustainability</u>	C
<ul style="list-style-type: none"> <li>SJMC has made good progress in becoming a sustainable campus in terms of the wider sustainable framework - it includes the use of renewable fuel, supporting sustainable methods and the ongoing initiative of plate bank.</li> <li><b>Recommendations:</b> We recommend SJMC to have yearly set goals and detailed strategic planning for a sustainable green wider picture.</li> </ul>	

# Statement of Purpose

*Planetary health is human health.*

The Planetary Health Alliance describes planetary health as “a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change “the greatest threat to global health in the 21st century,” many medical school’s institutional priorities do not reflect the urgency of this danger to human health.

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

With the purpose of increasing planetary health awareness and accountability among medical schools, we have created a Planetary Health Report Card that medical students internationally can use to grade and compare their home institutions on an annual basis. This medical-student-driven initiative aims to compare medical schools nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) university support for student planetary health initiatives, and 4) community outreach centred on environmental health impacts 5) medical school campus sustainability.

# Definitions & Other Considerations

## Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilisation and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
  1. Describe how the environment and human health interact at different levels.
  2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
  3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more

broadly. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions providers are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Clerkship:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations or placements.

**Other considerations:**

- If there are more than one "tracks" at your medical school with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples).

**Added to our resources in 2022, the Planetary Health Report Card [Literature Review by Metric](#) collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.**

# Planetary Health Curriculum

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

## Curriculum: General

1.1. Did your <u>medical school</u> offer elective courses (student-selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered <b>more than one</b> elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered <b>one</b> elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does <b>not</b> have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a <b>lecture</b> on planetary health.
0	No, the medical school has <b>not</b> offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Score explanation: A Course titled 'Citizen Doctor' is present in the curriculum for first-year students. The objective of this course is to expose future doctors to all aspects of health and to bring about a sense of recognising the need for change. The course is conducted by the Department of Health and Humanities in St John's and is allotted "20" hours.</i></p> <p><i>The topics covered in the course are:</i></p> <ul style="list-style-type: none"> <li>● <i>Climate change: its causes and consequences</i></li> <li>● <i>Sustainability</i></li> <li>● <i>Water: its pollution, management and conservation</i></li> <li>● <i>Air pollution</i></li> <li>● <i>Globalisation and over-consumption</i></li> <li>● <i>Garbage management</i></li> <li>● <i>Rights of a citizen</i></li> <li>● <i>Key elements of democracies</i></li> <li>● <i>Ecological mapping and action planning</i></li> </ul> <p><i>Students were divided into groups to perform environmental mapping and interview various persons of interest in their college campus.</i></p> <p><i>Additionally, the fourth years are required to choose a set of electives that they will engage in for a month. In the newest list of preclinical electives, titles such as "Planetary Health and Humanities, and Digital Health and Environmental Sustainability" have been introduced that cover exposure to activities that mitigate climate change.</i></p>	

## Curriculum: Health Effects of Climate Change

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

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

*Score explanation: The third-year subjects community medicine and forensic medicine briefly cover topics such as heat stroke, heat cramps and heat exhaustion as a part of the effect of heat stress. Its relation to global warming and occupational health is briefly covered in a few slides by the Department of Community Medicine.*

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

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

*Score explanation: The impact of extreme weather events on health systems and individuals was briefly discussed as a part of the 'citizen doctor' programme for first-year students. This course is conducted by the Department of Health and Humanities however, it's not a part of the core curriculum.*

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

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

*Score explanation: The Department of Community Health briefly mentions the changing patterns of infectious diseases such as Cholera and Kala-Azar due to increased global temperatures in the lectures for third-year medical students. Further, this topic was also covered as a part of the 'Citizen Doctor' course for first-year students, discussing the influence of climate change on the changing patterns of infectious diseases through the example of COVID-19, which is in part due to the disruption of natural ecosystems and wildlife.*

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

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

*Score explanation: The Department of Pathology holds a demonstration for second-year students where the effects of air pollution on lung diseases and respiratory functioning are covered. The Department of Community Health also briefly covers the effect of air pollution in a chapter of the curriculum titled 'Environment and Health' as well as in the chapter on occupational diseases.*

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

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

*Score explanation: This specific topic was neither covered in the core curriculum nor the elective coursework. In 'Park's Textbook of Preventive and Social Medicine' which serves as the recommended textbook for third-year students there are a few lines that mention the cardiovascular health effects but this is neither covered in lectures nor routinely asked in exams.*

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

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

*Score explanation: This specific topic was covered in a lecture titled 'Stress and anxiety due to changes in rain pattern' as a part of the 'Citizen Doctor' program for first-year students conducted by the Department of Health and Humanities. However, it is not part of the core curriculum.*

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



3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: In the series of lectures on the module titled 'Environment and Health' by the Department of Community Health for third-year students; the relation between global warming and its effect on industries such as agriculture and fishing was briefly discussed as a part of the core curriculum. Further, this topic was also covered by the Department of Health and Humanities under the elective course titled 'Citizen Doctor' for first-year students.</i></p>	

<b>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?</b>	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: In the module on demographics and population explosion the Department of Community Health briefly discusses the impact of climate change being unequally distributed in the population belonging to the lower socioeconomic statuses. This was also covered in the 'Citizen Doctor' program by the Department of Health and Humanities'.</i></p>	

<b>1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?</b>	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: In a series of lectures on the module 'Environment and Health' by the Department of Community Health briefly covers temperate zone warming and talks about the heat island phenomena causing cities to become warmer than their surrounding rural areas.</i></p>	

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

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

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

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<i>Score explanation: The environmental threats caused by humans are briefly discussed in the chapter 'Environment and Health' by the Department of Community Medicine for second and third-year students. During the clinical postings the department also discusses various issues like floods attributed to the encroachment of the lake as well as recent droughts in the city. Further, competencies decided by the state university include discussing the effects of health due to air, water and noise pollution along with the ill effects of radiation. In the chapter on disaster management, there is a brief discussion on man-made disasters and their effect on global warming. There is also a chapter on occupational health that covers diseases such as farmers' lung, asbestosis and lead poisoning. This topic is also covered as a part of the citizen doctor program for first-year MBBS students.</i>	

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

3	Indigenous knowledge and value systems are <b>integrated throughout</b> the medical school's planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included <b>briefly</b> in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<i>Score explanation: This specific topic was neither covered in the core nor the elective coursework.</i>	

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

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

*Score explanation: This topic was covered by the 'Citizen Doctor' program for first-year students in a lecture on how the waste we produce ends up affecting the more vulnerable populations. further students were given the task of interviewing various members of marginalised communities and compiling their findings in a presentation. However, this is not a part of the core curriculum.*

### *Curriculum: Sustainability*

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

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

*Score explanation: The benefits of a plant-based diet were briefly mentioned in a lecture on carbohydrates conducted by the Department of Biochemistry for first-year students highlighting the lower incidence of colon cancer in vegetarians. The same was also mentioned in a lecture conducted by the Department of Physiology in a lecture as part of the GI module again for first-year students. Both are subjects in the core curriculum.*

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

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

*Score explanation: This specific topic was neither covered in the core nor the elective coursework.*

**1.17. Does your medical school curriculum cover these components of sustainable clinical**

practice in the <u>core</u> curriculum? (points for each)	
2	The health <b>and</b> environmental <b>co-benefits</b> of <b>avoiding</b> over-medicalisation, over-investigation and/or over-treatment
2	The environmental impact of <b>pharmaceuticals</b> and over-prescribing as a cause of climate health harm. Alternatively teaching on <b>deprescribing</b> where possible and its environmental and health co-benefits would fulfil this metric.
1	The health <b>and</b> environmental <b>co-benefits</b> of <b>non-pharmaceutical management</b> of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK.
1	Environmental impact of <b>surgical</b> healthcare on planetary health and the climate crisis, and how can it be mitigated
1	The impact of <b>anaesthetic</b> gases on the healthcare carbon footprint and ways to reduce anaesthesia's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions
1	The impact of <b>inhalers</b> on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	<b>Waste production</b> within healthcare <b>clinics</b> and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting)
	<p><i>Score explanation: The harms of overprescribing and the benefits of avoiding over-medication were briefly covered by the Department of Pharmacology for second-year students but the environmental benefits were not mentioned.</i></p> <p><i>The health benefits of non-pharmaceutical management of communicable diseases such as type 2 diabetes are included in the curriculum for both fourth-year and third-year students. The curriculum is covered by both, the Department of Internal Medicine and the Department of Community Health respectively. However, the environmental benefits are covered by neither department.</i></p>

### *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?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the <b>core</b> curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in <b>elective</b> coursework.
0	No, there are <b>not</b> strategies introduced for having conversations with patients about climate change

*Score explanation: There are no strategies currently present in either the core or elective curriculum that teach medical students about having conversations with patients about the 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?**

2	Yes, the <b>core</b> curriculum includes strategies for taking an environmental history.
1	Only <b>elective</b> coursework includes strategies for taking an environmental history.
0	No, the curriculum does <b>not</b> include strategies for taking an environmental history.

*Score explanation: During the clinical postings conducted by the Department of Community Health the students are taught to take clinico-social cases. A section of the clinico-social case focuses on the environmental history of patients to understand predisposing factors that may have led to the disease. This includes a history of the demographics of the patient, vector breeding sites around the house, garbage disposal, sources of drinking water and occupational exposures.*

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

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

4	Yes, the medical school is currently in the process of making <b>major</b> improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making <b>minor</b> improvements to ESH/planetary health education.
0	No, there are <b>no</b> improvements to planetary health education in progress.

*Score explanation: Since its inauguration in 2018, the Citizen Doctor course for first-year students has continuously been modified to include the changing patterns of climate change as well as to include the newer data on planetary health.*

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

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

*Score explanation: The Citizen Doctor program has been well integrated into the first-year curriculum with changes constantly being made to improve it. The results of the program have also been published in the Indian Journal of Medical Ethics <https://pubmed.ncbi.nlm.nih.gov/32546452/>. Further, some topics on global warming, sustainable development goals, water, air and noise pollution are covered by the Department of Community Health as a part of the core curriculum for second and third-year students.*

*As a part of electives for fourth-year students, the Department of Health and Humanities has introduced topics such as 'Planetary Health and Humanities' and 'Digital Health and Environment Sustainability' which aim to broaden the understanding of the planetary health of a medical student.*

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

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

*Score explanation: The Health and Humanities department which comes under the St. John's Research Institute is responsible for conducting the 'Citizen Doctor' program for first-year students. Dr. Manjulika Vaz who is the head of the department along with her team oversees the implementation and integration of the course. This is also undertaken by the Green Campus Committee.*

**Section Total (36 out of 72)**

**50%**

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

# Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ?	
3	Yes, there are faculty members at the <b>medical school</b> who have a <b>primary</b> research focus in planetary health <b>or</b> healthcare sustainability.
2	Yes, there are individual faculty members at the <b>medical school</b> who are conducting research <b>related</b> to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the <b>institution</b> , but none associated with the medical school.
0	No, there are <b>no</b> planetary health and/or healthcare sustainability researchers at the <b>institution</b> or <b>medical school</b> at this time.
<p><i>Score explanation: There are faculty members at SJMC who are currently conducting research related to planetary health. An ongoing project is 'Understanding the knowledge and attitudes of faculty of healthcare and medical institutions to planetary health in curricula - a mixed methods multicentre study' by Dr. Manjulika Vaz. Another study titled 'The study of simple educational intervention to assess knowledge, attitude and practices regarding climate change and its impact on health among school-going adolescents in a rural area of Bangalore District, Karnataka' was conducted by the Department of Community Health. There has also been a publication in 2023 in the Indian Journal of Medical Ethics titled '<a href="#">the urgent need for planetary health education for professionals and students in India</a>' by Dr. Manjulika Vaz. Furthermore, there is ongoing research in collaboration with King's College London on the topic of Sustainability, Health, AI, Digital technologies and the Environment with Dr. Manjulika Vaz. Hence we've allotted 3 points as Dr. Manjulika Vaz has a primary research focus on planetary health.</i></p>	

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

0	There is <b>no</b> dedicated department or institute.
<p><i>Score explanation: There is an <a href="#">occupational health</a> department in St John's National Academy of Health Sciences (the institution that SJMC is a part of) and there are plans to make a section of the health and humanities department for planetary research but there are no plans to make an independent department.</i></p>	

<b>2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your <u>medical school</u>?</b>	
3	Yes, there is a process in which community members impacted by climate and environmental injustice have <b>decision-making power</b> in the climate + environmental research agenda.
2	Yes, there is a process in which community members impacted by climate and environmental injustice <b>advise</b> the climate + environmental research agenda.
1	<b>No</b> , but there are <b>current efforts</b> to establish a process for community members to advise or make decisions on the research agenda.
0	There is <b>no</b> process, and <b>no</b> efforts to create such a process.
<p><i>Score explanation: Currently there is no process or no effort to create such a process.</i></p>	

<b>2.4. Does your <u>institution</u> have a planetary health website that centralises ongoing and past research related to health and the environment?</b>	
3	There is an <b>easy-to-use, adequately comprehensive</b> website that <b>centralises</b> various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
2	There is a website that <b>attempts to centralise</b> various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The <b>institution</b> has an <b>Office of Sustainability website</b> that includes <b>some</b> resources related to health and the environment.
0	There is <b>no</b> website.
<p><i>Score explanation: Currently there are no websites dedicated to planetary and environmental health.</i></p>	

<b>2.5. Has your <u>institution</u> recently hosted a conference or symposium on topics related to planetary health?</b>	
4	Yes, the <b>medical school</b> has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to planetary health in the past year.



2	Yes, the <b>institution</b> has hosted a conference on topics related to planetary health in the past three years.
1	The <b>institution</b> has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the <b>institution</b> has not hosted a conference on topics related to planetary health in the past three years.

*Score explanation: Conferences and lectures hosted by SJMC in the past year are as follows:*

*1) A session held on the Topic: The Earth is ill: Science, ethics and the way forward by Dr Sharachandra Lele on Oct 29th, 2023 in collaboration with the Department of Community Health.*

*2) A Seminar on “The Impact of Climate Change on Health” conducted by the Department of Community Health, SJMC in January 2024 which emphasised the objectives of NPCCHH – National Program on Climate Change and Human.*

*Some conferences or lectures hosted by SJMC previously are:*

*1) The joint 14th World Congress of Bioethics and 7th National Bioethics Conference Congress "[Health for all in an unequal world: Obligations of global bioethics](#)", was co-hosted by SJMC [Research Institute](#) in 2018. It focused on the current global crisis of widening disparities in health. The conference also spoke about the deteriorating quality of the overall environment which disproportionately affects the deprived communities.*

*2) The [Dr. Kiruba Sankar Memorial Lecture 2019](#) was delivered by Professor Kalpana Balakrishnan PhD, FAMS, Director, WHO Collaborating Center for Occupational and Environmental Health & SRU-ICMR Centre for Advanced Research on Air Quality, Climate and Health, Department of Environmental Health Engineering, Sri Ramachandra Institute for Higher Education and Research on the topic titled “Creating Seamless Breathing Spaces: The challenge of addressing air pollution in India”.*

*3) The Indian Academy of Sciences and Springer Nature, supported by the Grand Challenges Programme, tAcT and SJMC Research Institute hosted a lecture on March 22nd, 2019, by Sir Andy Haines, former Dean of the London School of Hygiene and Tropical Medicine, on “[Sustainable, Healthy Cities and Food Systems](#)”.*

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

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

*Score explanation: Currently, SJMC is not a member of any national or international planetary health or ESH organisations.*

<b>Section Total (7 out of 17)</b>	<b>41.18%</b>
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*Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

## Community Outreach and Advocacy

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

<b>3.1. Does your <u>medical school</u> partner with community organisations to promote planetary and environmental health?</b>	
3	Yes, the <b>medical school</b> meaningfully partners with <b>multiple</b> community organisations to promote planetary and environmental health.
2	Yes, the <b>medical school</b> meaningfully partners with <b>one</b> community organisation to promote planetary and environmental health.
1	The <b>institution</b> partners with community organisations, but the medical school is not part of that partnership.
0	No, there is <b>no</b> such meaningful community partnership.
<p><i>Score explanation: The Department of Health and Humanities partners with organizations such as “SOCHARA” - the Society For Community Health Awareness And Research and Gramaantara which is a rural development organization, especially during conducting the elective titled “Planetary Health and Humanities” for the fourth year medical students.</i></p> <p><i>Members of SJMC also partner with the Council for Active Mobility to promote environmental health. The organisation aims to transform the city into a more healthy and sustainable community by promoting cycling or walking. Additionally, there are some talks and events hosted by the health and humanities department during which individuals working in environmental sustainability organisations are invited to promote sustainable healthcare and environmental health.</i></p>	

<b>3.2. Does your <u>medical school</u> offer community-facing courses or events regarding planetary health?</b>	
3	The <b>medical school</b> offers community-facing courses or events at least once every year.
2	The <b>medical school</b> offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The <b>institution</b> has offered community-facing courses or events, but the <b>medical school</b> was not involved in planning those courses or events.
0	The <b>institution/medical school</b> have not offered such community-facing courses or events.
<p><i>Score explanation: As part of the rural outreach program for year 1 medical students, there is an</i></p>	

annual health education program “Child to Child” where a group of medical students teach a group of school-going students in the age group of 10-12 years from a rural community. Every year there are topics covered related to planetary health, last year it was related to plastics and health impact. The program targets around 100 students and is quite effective as the school students themselves are later on made to teach their peers. Additionally, there is also a street play, where the students convey a crucial topic related to health education and sometimes it directly relates to environmental health. This too impacts around 100 individuals in the community, across all age groups.

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

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

*Score explanation: No, students don't receive regular coverage related to planetary health or sustainable healthcare in university update communications. However, there are digital posters created and shared within the student community during specific days by the campus sustainability club, “Ecologics”. Recently, a community waste cleanup was done within the campus, to promote awareness on sustainability.*

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

2	Yes, the <b>institution</b> or <b>main affiliated hospital trust</b> offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health.
1	Yes, the <b>institution</b> or <b>main affiliated hospital trust</b> offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are <b>no</b> such accessible courses for post-graduate providers

*Score explanation: As a part of the postgraduate curriculum in Community health, seminars are held once a week. Some of the seminars (up to 3 per year) do cover topics related to sustainable healthcare. Currently, there are no courses with a primary focus on planetary health and/or sustainable healthcare offered to postgraduate students. However, the health & humanities department is currently working on developing a bioethics fellowship to develop ethical biomedical and health researchers who are responsive to the socio-cultural contexts of India. This fellowship would include planetary health as one of its modules.*

**3.5. Does your medical school or its affiliated teaching hospitals have accessible educational**

materials for patients about environmental health exposures?	
2	Yes, the <b>medical school</b> or <b>all affiliated hospitals</b> have accessible educational materials for patients.
1	<b>Some</b> affiliated hospitals have accessible educational materials for patients.
0	<b>No</b> affiliated medical centres have accessible educational materials for patients.
<i>Score explanation: There aren't any accessible educational materials for patients.</i>	

3.6. Does your <b>medical school</b> or its <b>affiliated teaching hospitals</b> have accessible educational materials for patients about the health impacts of climate change?	
2	Yes, the <b>medical school</b> or <b>all affiliated hospitals</b> have accessible educational materials for patients.
1	<b>Some</b> affiliated hospitals have accessible educational materials for patients.
0	<b>No</b> affiliated hospitals have accessible educational materials for patients.
<i>Score explanation: There aren't any accessible educational materials for patients.</i>	

<b>Section Total (7 out of 14)</b>	<b>50%</b>
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*Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

## Support for Student-Led Planetary Health Initiatives

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

4.1. Does your <u>medical school</u> or your <u>institution</u> offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the <b>medical school</b> or <b>institution</b> <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The <b>medical school</b> or <b>institution</b> encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, <b>but</b> there is no student funding available and there is no requirement to participate.
0	No, <b>neither</b> the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.
<p><i>Score explanation:</i>            There are various programmes offered by the medical school as well as student-driven initiatives that are supported and funded by the institution.</p> <ol style="list-style-type: none"> <li>1) The "Citizen Doctor" course was introduced for first-year medical students at St. John's Medical College in 2018 by the Division of Health and Humanities at St. John's Research Institute with the goal of building a sense of citizenship, responsiveness, and critical thinking in up and coming healthcare professionals while exposing them to the larger context of health. It included classes in Environmental Sciences. It involves efforts from the students to examine areas of sustainability like Food and Water wastage, Sanitation, and Waste management within the campus through exercises like mapping and creating a report- to derive outcomes and initiatives at the student level and campus level, which eventually reflect at the community level, in the form of action plans.</li> <li>2) Community Health Outreach Program-The Department of Community Health runs several programmes each year, including the Community Health Action Programme (CHAP) in the third professional year (August 21–26, 2023) and the results and recommendations are then presented in the form of student-led initiatives and institutional initiatives. The Urban Orientation Programme (UOP) in the second professional year (March- June 2023) involves environmental intervention exercises, such as mapping and surveys of solid waste management, vector breeding sites, leaks in water pipes, etc., in Bangalore's vulnerable and impoverished urban population.</li> <li>3) The institution supports Ecologics, the campus sustainability club, and its initiatives. The funding for the club is through a donation from alumni that is passed down through batches as they take over as heads of the club. Ecologics also receives funding from a shared fund for all college clubs.</li> </ol>	

4.2. Does your institution offer opportunities for medical students to do research related to

planetary health and/or sustainable healthcare?	
2	The <b>institution</b> has a <b>specific</b> research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these <b>require student initiative</b> to seek these out and carry them out in their spare time.
0	There are <b>no opportunities</b> for students to engage in planetary health/sustainable healthcare research.
<p><i>Score explanation:</i>            In 2023, the institution introduced “Planetary Health and Humanities” and “Digital Health and Environmental Sustainability” as electives, which offers 4 students in each elective the opportunity to work closely with the Department of Humanities and conduct research.            With voluntary efforts from the students, 2 projects have been approved by the Millennium Fellowship related to the benefits of cycling and recycling of clothes that aim to promote sustainability.            Students can conduct research in any subject included in the medical curriculum as well as Planetary health and sustainable healthcare with approval from the St. John’s Research Institute.</p>	

4.3. Does the <b>medical school</b> have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
2	The <b>medical school</b> has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a <b>medical school</b> webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is <b>no medical-school</b> specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
<p><i>Score explanation:</i>            There is a dedicated webpage on the medical school website that provides details about the goals, initiatives, and current projects of the campus sustainability club. It also provides information on the mentors and club representatives. However, the page is not up-to-date and does not contain important details regarding research programs or the mentors.  <a href="https://www.stjohns.in/medicalcollege/Ecologics.php">https://www.stjohns.in/medicalcollege/Ecologics.php</a>            Additionally, the student-run Ecologics Instagram page serves as a platform for promoting events, workshops and initiatives pertaining to planetary health and sustainability. This page also frequently shares educational content regarding simple lifestyle adjustments that students can make to practise a more environmentally conscious life.  <a href="https://www.instagram.com/ecologics_sjmc/">https://www.instagram.com/ecologics_sjmc/</a></p>	

**4.4. Does your medical school have registered student groups dedicated towards fostering a**

culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
2	Yes, there is a student organisation <b>with faculty support</b> at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it <b>lacks faculty support</b> .
0	No, there is <b>not</b> a student organisation at my institution dedicated to planetary health or sustainability in healthcare.
<p><i>Score explanation:</i>  <i>Ecologics (campus sustainability club)- It is a Student-driven initiative that aims to promote sustainable initiatives and encourages students to do the same. It has organised cleanliness drives, excursions and various competitions to promote awareness surrounding planetary health. It is actively supported by the institution and is guided by the Head faculty of the Health and Humanities department.</i>  <a href="https://www.instagram.com/ecologics_sjmc/">https://www.instagram.com/ecologics_sjmc/</a></p>	

4.5. Is there a student liaison representing sustainability interests who serves on a <u>medical school</u> or <u>institutional</u> decision-making council to advocate for curriculum reform and/or sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.
<p><i>Score explanation:</i>  <i>The Green Campus Committee is an advisory board comprising the Associate Director of the Medical College along with other doctors and students representing medical, allied health sciences, and nursing colleges. Representatives discuss and work with the management to come up with solutions to maintain an eco-friendly environment at the college and ensure the campus is sustainable.</i></p>	

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)	
1	Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.
1	Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
1	Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.



1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
1	Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)

*Score explanation:*

- 1) Panels, speaker series, or similar events related to planetary health that have students as an intended audience:
  - A presentation and discussion on the Psychosocial Effect of Climate change on vulnerable groups in society was conducted on 7 October, 2023.
  - Students were invited to “The Earth is ill: Science, Ethics and the Way Forward” by Dr Sharachchandra Lele, an online webinar that was part of The Annual Prakash Shetty Public Lecture on 29 October, 2022.
  - A Web-based online course about the Fundamentals of Urban Health was organized by the Division of Epidemiology & Population Health of the St. John’s Research Institute. This course was available for students interested in urban public health, it also elaborated on Urban Health and Sustainable Development goals in one of its modules. (October 2023)
  - A discussion promoting the use of menstrual cups by Dr Meenakshi Bharath was conducted on 21 October, 2023.
  - As a part of the Citizen Doctor Programme, a lecture and discussion on Soil health and human health - Food security – Climate change and agriculture; Water distress and Air pollution was conducted by Nandita Abreo Subramanian on 4 November, 2023.
- 2) Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts:
  - Swachhtha Pakhwada, a cleanliness drive was organized by the social awareness club (Conscientia) and the Ecologics club. During the event, a team of dedicated volunteers, both students and staff, came together and collected 135 kgs of waste. (1 October, 2023)
  - The batch of 2023, as a part of the Citizen Doctor Programme, was assigned to assess current sources of water and food wastage throughout the campus and come up with solutions to reduce food wastage and promote the conservation of water.
- 3) Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students):
  - Tour de Mugalur, a 60 km long cyclothon, is conducted annually by the Dept of Community Medicine and the Ecologics Club in partnership with CFAM (Council For Active Mobility) to promote cycling as a means of transport. This year marked the 6th edition of the marathon and the theme this year was “Two wheels, one earth, preserve both” (26 June, 2023)

**Section Total (10 out of 15)**

**66.67%**

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

# Campus Sustainability

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

5.1. Does your <u>medical school</u> and/or <u>institution</u> have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is <b>at least one designated staff member</b> for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but <b>no specific staff member</b> in charge of medical school and/or hospital sustainability.
1	There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee
0	There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability
<p><i>Score explanation:</i>            At SJMC we don't have an office of sustainability, but we do have an ecologics task force. A Green Campus ( management level )committee of ecologics ( by the students) together work for the implementation and working of a sustainable eco-friendly campus. The Green campus comprises of The Associate Director of the college, representatives from the medical paramedical and nursing Departments along with associates from Engineering and Facility Management and the Department of Management and Estate under the guidance of Dr Manjulika Vaz from the Department of Health and Humanities</p>	

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

	Currently, the CO <sub>2</sub> and other greenhouse gas emissions are under permissible limits prescribed by the Air Pollution Control Board. There are many initiatives for planting trees to counterpoise CO <sub>2</sub> emissions. SJMC uses renewable sources of energy.
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**5.3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilize renewable energy?**

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

*Score explanation:*  
 90% of energy is supplied through renewable energy sources. The renewable source used is wind energy, provided by a 3rd party. Solar energy is used in hostels and hospitals for generating hot water and solar-powered street lights are installed in a few parts of the campus. 10 % of the energy source is from diesel-run generators in case of emergency or power failure

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

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

*Score explanation:*  
 Sustainable building practices are used throughout the campus. Recycled water is utilised for construction purposes and also for watering plants. Clay bricks are avoided and concrete bricks are encouraged throughout to reduce CO<sub>2</sub> emissions and prevent topsoil depletion by manufacturing of clay bricks

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

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

*Score explanation:*

*SJMC discourages the use of private vehicles like cars motorcycles etc. From the management level, they have parking fees in the campus parking areas. A student and faculty-run cycling club to encourage sustainable transport. The cycling club arranges an annual cycling campaign to Mugalur named "Tour de Mugalur " is held with a new theme every year. But the rules aren't stringent and it solely depends on the individuals to be part of it.*

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

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

*Score explanation:*

*Organic waste generated on the campus used to be fed to in-house animals but now along with food waste is outsourced to a third party for disposal. There are also plans for building food composts for the hospital and canteen food waste.*

*The conventional wastes are managed through*

- 1. Biomedical waste - Mairidini bio industries*
- 2. Solid - MSGP Infratech*
- 3. E-waste - royal touch*
- 4. Hazardous waste - Alpha refineries*

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

3	Yes, the medical school has <b>adequate</b> sustainability requirements for food and beverages, including meat-free days or no red-meat, and <b>is engaged</b> in efforts to increase food and beverage sustainability.
2	There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The medical school <b>is engaged</b> in efforts to increase food and beverage sustainability.

1	There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The medical school is <b>not</b> engaged in efforts to increase food and beverage sustainability.
0	There are <b>no</b> sustainability guidelines for food and beverages.
<p><i>Score explanation:</i>  <i>Currently, there are no sustainability guidelines for food and beverages.</i></p>	

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

<b>5.9. Are there sustainability requirements or guidelines for events hosted at the <u>medical school</u>?</b>	
2	Every event hosted at the medical school <b>must</b> abide by sustainability criteria.
1	The medical school <b>strongly recommends or incentivizes</b> sustainability measures, but they are <b>not required</b> .
0	There are <b>no</b> sustainability guidelines for medical school events.
<p><i>Score explanation:</i>  <i>The hostel dietary uses steel plates for serving food. There is an option for borrowing steel plates cups and cutleries for small department events for 20 to 60 people to reduce the use of single-use plastic plates - called the "Plate Bank" run by the Ecologics club under the guidance of Dr. Manjulika Vaz, from the department of health and humanities</i>  <i>The rules aren't stringent and depend on individuals and the department's choice therefore, we are giving a lower score</i></p>	

<b>5.10. Does your <u>medical school</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?</b>	
2	Yes, the medical school has <b>programs</b> and <b>initiatives</b> to assist with making lab spaces more environmentally sustainable.

1	There are <b>guidelines</b> on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are <b>no</b> efforts at the medical school to make lab spaces more sustainable.
<p><i>Score explanation:</i>  All the laboratories are accredited by the National Accreditation Board for Testing and Calibration Laboratories (NABL) with audits done every 2 years. Sustainability is a criterion for NABL.  <a href="https://nabl-india.org/">https://nabl-india.org/</a></p>	

<b>5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?</b>	
4	The institution is <b>entirely divested</b> from fossil fuels <b>and</b> has made a <b>commitment to reinvest divested funds</b> into renewable energy companies or renewable energy campus initiatives.
3	The institution is <b>entirely divested</b> from fossil fuels.
2	The institution has <b>partially divested</b> from fossil fuel companies <b>or</b> has made a <b>commitment to fully divest</b> , but <b>currently</b> still has fossil fuel investments.
1	The institution has <b>not divested</b> from fossil-fuel companies, but faculty and/or students are <b>conducting organised advocacy</b> for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been <b>no efforts</b> to change that.
<p><i>Score explanation:</i>  The Institution's endowment portfolio does not include any fossil fuel companies. All the power contracts are given to companies advocating wind and solar energy.</p>	

<b>Section Total (16 out of 32)</b>	<b>50%</b>
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Back to Summary Page [here](#)

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

# Grading

## Section Overview

This section focuses on the grading of the report card. The institution received a grade for each of the individual sections as well as an overall institutional grade. Section point totals were tallied, divided by the total points available for the section, and converted to a percentage. The overall institutional grade is a weighted average of the section grades, with curriculum receiving a higher weight owing to its larger number of metrics. Letter grades for each section and the institution overall were then assigned according to the table below.

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

## Planetary Health Grades for the St John's Medical College

The following table presents the individual section grades and overall institutional grade for St John's Medical College on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
<b>Planetary Health Curriculum (30%)</b>	$(36/72) \times 100 = 50\%$	C
<b>Interdisciplinary Research (17.5%)</b>	$(7/17) \times 100 = 41.18\%$	C-
<b>Community Outreach and Advocacy (17.5%)</b>	$(7/14) \times 100 = 50\%$	C
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	$(10/15) \times 100 = 66.67\%$	B
<b>Campus Sustainability (17.5%)</b>	$(16/32) \times 100 = 50\%$	C
<b>Institutional Grade</b>	$(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 51.37\%$	C

# Report Card Trends

## Section Overview

This graph demonstrates trends in overall and section grades for the years in which **St. John's Medical College** has participated in the Planetary Health Report Card initiative.

## Planetary Health Report Card Trends for St. John's Medical College

