



Planetary Health Report Card (Medicine):

*Kalinga Institute of Medical Sciences,
Bhubaneswar, India (KIIT University)*



2023-2024 Contributing Team:

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Summary of Findings

Overall	C+
<u>Curriculum</u>	B+
<ul style="list-style-type: none"> • KIMS as a medical school includes many aspects of planetary health as a part of its curriculum in the form of lectures and discussions. However, aspects like carbon footprint need more extensive inclusion. • Recommendations: KIMS should take the initiative to educate patients on the impact of planetary health on individual health. We recommend that KIMS integrate additional planetary health topics into the undergraduate curriculum and delve deeper into the already integrated topics during lectures. 	
<u>Interdisciplinary Research</u>	B-
<ul style="list-style-type: none"> • The KIIT University and KIMS have hosted numerous conferences, seminars, webinars, and symposiums on planetary health and related topics in recent years. However, these events are not directly targeted at medical students as a primary objective. At the institutional level, remarkable research and work on planetary health are conducted, supported by specific departments and there is a dedicated website page detailing past, ongoing, and upcoming research projects. • Recommendations: KIMS could create more opportunities for medical students to be involved in conferences and symposiums at the university level. It could be a part of the Planetary Health Alliance. More emphasis should be given to encouraging advanced research and advocacy, and efforts in education about planetary health and related topics. 	
<u>Community Outreach and Advocacy</u>	C-
<ul style="list-style-type: none"> • KIMS and KIIT university partners with local communities and NGOs to raise awareness about planetary health. However, neither are planetary health or sustainable healthcare topics included in communication updates for students, nor do the affiliated medical centres have accessible educational materials for patients. • Recommendation: KIMS should offer community-facing courses or events regarding planetary health as well as patient-facing educational materials about health impacts of climate change and environmental health exposures. 	
<u>Support for Student-Led Initiatives</u>	C
<ul style="list-style-type: none"> • KIMS and KIIT University support various student-led activities but regarding planetary health, there are comparatively more activities at the university level than at the medical school level. There is no appreciable support for student-led research activities at the medical school. At the university level, various research opportunities on climate change and environmental sustainability are provided and many QIPs are underway. • Recommendations: Research activities for medical students at the undergraduate level must be encouraged at the medical school and the involvement of medical students in activities at the university level should be more. 	
<u>Campus Sustainability</u>	C+
<ul style="list-style-type: none"> • KIIT and KIMS University have implemented many initiatives to become a more sustainable campus including fossil fuel divestment, using renewable energy on-site, plantation drives, prohibition of two-wheelers on campus, and setting achievable goals for carbon neutrality by 2050. • Recommendations: We recommend focusing on making lab spaces more sustainable and introducing/improving sustainable guidelines for events and supply procurement. 	

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 medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Score explanation: KIMS provides lecture-based electives on Biomedical waste management, Infection control and environment, Nutritional monitoring of children under five years, infant and young feeding practices, functions and services in maternal and child health[MCH] clinic along with many other topics that include a lecture on planetary health.</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 in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: As a part of the Community Medicine curriculum, the unit “ENVIRONMENT AND HEALTH” was thoroughly explored. The chapter provided in-depth knowledge of heat stress, the effects of climate change, rising temperatures and heat stress on the environment and people, and preventive measures to counter the effects.</i></p>	

Furthermore from the ongoing year 2023-2024, as per the curriculum in clinical medicine, the effects of extreme heat and pollution on the human body and the associated health risks like heat cramps, heat exhaustion, heat oedema, heat-related illness, heat syncope, heat stroke will further be dealt in depth in future.

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

Score explanation: A few lectures on disaster management, famines and their impact on a person's physical and mental health were taken. Conditions such as protein-energy malnutrition were also given importance.

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

Score explanation: In 2022-2023, as a part of the curriculum in Community Medicine, the chapter titled "CONCEPTS OF HEALTH AND DISEASE" was extensively and elaborately covered. It provided ideas of interaction and interrelationship between the host, agent and environment, in the cause of a disease {Epidemiological Triad}, vector-borne infections and their changing patterns, zoonotic diseases etc in several slides.

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

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

Score explanation: In the year,2022-23, as a part of Human Physiology, the chapter of Respiratory Health of the unit “RESPIRATORY SYSTEM” was elaborately discussed. It emphasised various aspects of air pollution and its effect on the respiratory and cardiovascular system giving instances of cases like asthma, lung carcinomas, dyspnoeas and the methods to improve the conditions. Moreover, the discussion in the class also dealt with methods and measures to reduce the instances of prevalent diseases and health conditions caused by depreciating air quality.

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

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

Score explanation: As a part of the first-year medical curriculum in Physiology, the unit Cardiovascular System had dedicated chapters related to the effects of climate change [especially heat and temperature] on the cardiovascular health of individuals. It talked about the effects of temperature on the stroke volume, cardiac output, heart rate, blood vessels and circulation, effect on the sympathetic and parasympathetic systems of the body. Further, the effects of exercise on the cardio-respiratory system were discussed and a practical experiment dedicated to this was also a part of the curriculum. Moreover, in-depth details of various cardiac conditions were also discussed.

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

Score explanation: In the first year curriculum of Physiology, the chapter on “STRESS” discussed the physiological responses of the body to changes in the internal as well as the external environment. Further, a chapter on “Aging and Circadian Rhythm” highlighted the effects of exogenous factors such as pollution, exposure to toxic agents, radiations on normal ageing, the normal sleep-wake cycle and the occurrence of mutations in the body. Additionally, the impact of the above conditions on mental health giving instances of depression, sedentary lifestyle and dementia was also discussed.

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 in depth by the core curriculum.
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2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The relationships between health, individual patient food and water security, ecosystem health, and climate change were covered in the core curriculum under competency [CM5.3] Description of common nutrition-related health disorders {including macro-PEM, Micro-iron, Zn, iodine, Vit A}, their control and management; [CM5.4] Plan and recommending a suitable diet for the individuals and families based on local availability of foods and economic status etc in a simulated environment, [CM 5.5] Describing the methods of nutritional surveillance, the principle of nutritional education and rehabilitation in the context of socio-cultural factors, [CM 5.6] Enumerating and discussing the National Nutritional Policy, important national nutritional programs including Integrated Child Development Services Scheme[ICDS] etc of the NMC UG Curriculum. (Link: https://www.nmc.org.in/information-desk/for-colleges/ug-curriculum/)</i></p> <p><i>Additionally, preparation of diet charts as per specific diseases in practicals, and addressing the problems in community settings during clinical postings are also included.</i></p> <p><i>The impact of ecosystem health and climate change on individual health and food and water security have been highlighted under all of these competencies.</i></p>	

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?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: In the Community Medicine curriculum for undergraduates, lectures describing the steps and performing the clinical-socio-cultural and demographic assessment of the individual, family and community were discussed. While performing the demographic assessment, students were exposed to the disproportionate impact of extreme weather conditions like extreme heat or cold on low SES communities.</i></p> <p><i>Under competency[CM2.2] describing the sociocultural factors, family types, their role in health and disease and demonstration in a simulated environment the current assessment of socio-economic status was discussed.</i></p> <p><i>'Description of social psychology, community behavioural and community relationship and their impact on health and disease' along with Description of poverty and social security measures and their relationship to health and disease were covered under competency [CM 2.4] and [CM 2.5] respectively.</i></p> <p><i>Additionally, the curriculum in community medicine also includes a Family Adoption Programme, wherein each student has to adopt a family of low socio-economic status and take care of their all-round well-being for five years.</i></p>	

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: The concerned topic has not been covered in the curriculum until now.</i>	

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)?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: In the first year curriculum of KIMS, lectures on the effects and causes of various cancers [cervical cancer, bladder cancer, included] were discussed in the unit of 'Genetics and Molecular Biology', including the correlation between environmental hazards and toxins leading to cancer of the genitourinary system.</i></p> <p><i>Further in Physiology; in the unit of 'Reproductive System', the lectures dealing with the impact of environment and exogenous factors on the pubertal growth of males and females, the various lifestyle and occupation-related disorders[such as effects of cadmium, mercury, lead] and the methods of treatment were discussed. The lectures do mention the effect of various environmental toxins on fertility and pregnancy.</i></p> <p><i>As a part of the second-year curriculum (according to NMC Guidelines) the subject of pathology includes a chapter on Neoplasia where the topics such as endometrial cancers, vaginal cancers, cervical cancers and ovarian cancers, prostatic cancers, bladder cancers; their cause(emphasising its relation to environmental toxins), diagnosis, treatment and prognosis and prevention were discussed in depth.</i></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?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: Topics related to the health hazards of air, water, noise, radiation, and pollution were elaborately discussed under competency [CM3.1] in community medicine. Furthermore, lectures describing concepts of safe and wholesome water, sanitary sources of water, water purification process, water quality standards under competency [CM3.2], description of the aetiology and basis of water-borne diseases/jaundice/hepatitis/diarrhoea under competency [CM 3.3] and the description of solid waste, human excreta, sewage disposal under competency [CM 3.4] were thoroughly discussed. Under the family adoption programme of the NMC curriculum, the students are required to adopt one family from the nearby areas and deal with all their concerns such as clean, hygienic water supply, the spread of any kind of infectious or non-infectious disease in their locality or family, the sanitary condition of the region, routine health check-ups, etc.

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

Score explanation: During the first year of MBBS (UG Curriculum by NMC) as a part of the foundation course for undergraduate students, the students were encouraged to practise yoga as a part of their lifestyle change. Briefs about the actions of various natural, organic substances used as a source of drugs (eg- opioids, quinine, clove etc)for therapeutic purposes, their advantages, disadvantages, adverse effects and contraindications were also given.

In the Community Medicine curriculum for undergraduates, lectures describing the steps and performing the clinical socio-cultural and demographic assessment of the individual, family and community were discussed. Under competency[CM2.2] describing the socio-cultural factors, family <types>, its role in health and disease and demonstration in a simulated environment the current assessment of socio-economic status was discussed. 'Description of social psychology, community behavioural and community relationship and their impact on health and disease' and Description of poverty and social security measures and their relationship to health and disease were covered under competency [CM 2.4] and [CM 2.5] respectively.

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

Score explanation: In the Community Medicine curriculum, the chapter titled Environment and Health discussed the impact of various environmental toxins briefly. Additionally, the relations of specific toxins with people of specific socio-economic strata of the country were also discussed. Moreover, the chapter on respiratory diseases also focussed on this aspect and lectures in class included this topic giving instances of diseases such as silicosis, asbestosis, lung fibrosis, tuberculosis etc. Additionally, the curriculum in community medicine also includes a Family Adoption Programme, wherein each student has to adopt a family of low socio-economic status and take care of their all-round well-being for five years.

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

Score explanation: The chapter on 'Nutrition And Health' in the Community Medicine curriculum elaborately discusses the glycemic indices of different foods and their role as a risk factor in numerous diseases, one of them being diabetes. It also outlines the importance of dietary fibres, their types, sources from where it is obtained, nutritional values if any and their significance in incorporation into the diet. Moreover, lectures dealing with the cultivation and harvest of indigenous crops on the environment and economy were also taken.

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

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

Score explanation: The concerned topic has not been covered as a part of curriculum.

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (points for each)

2	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment
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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.
1	The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK.
1	Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated
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	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
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)
	<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> <i>The clinical as well as environmental effects and benefits of avoiding over-medicalisation, over-treatment and/or over-investigation were described to us in the clinical postings in the second year as a part of early clinical exposure by the clinical faculties of our institute.</i> <i>Lecture on the Importance of deprescribing in the course of treatment of disease and adverse effects of excessive medications, and cross-reactions between different medications were discussed in classes as a part of the second-year pharmacology curriculum. The environmental impact of over-prescribing was also briefly mentioned.</i> <i>Different non-pharmaceutical methods of management of diseases like impaired diabetes mellitus through lifestyle modifications, borderline hypertension, and stress disorders were discussed in the physiology, and biochemistry portion of the first-year undergraduate curriculum and are a part of the teachings in further years also.</i> <i>Waste production in clinics and different healthcare facilities and various methods of waste disposal were detailed in depth in the section of the Hospital Infection Control unit of the microbiology second-year undergraduate curriculum. It gives an idea on what are the different categories of biomedical wastes and how should be disposed of.</i>

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 core curriculum.

1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	No, there are not strategies introduced for having conversations with patients about climate change
<p><i>Score explanation: The undergraduate students perform role plays in OPDs, and IPDs of different departments of the hospital and at the community level for awareness generation and sensitization as a part of electives. They frequently discuss the health effects of climate change with the patients, for example; the health impact of extreme heat like heat strokes and cramps as well as those of extreme cold, air pollution etc.</i></p> <p><i>Postgraduate trainees and interns conduct focus group discussions at the community level.</i></p>	

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.
<p><i>Score explanation- Lectures on the importance of history taking as a part of clinical diagnosis of disease were thoroughly taught as a part of the second-year undergraduate curriculum in clinical postings of different departments[medicine, surgery, paediatrics, obs&gyn] at our institute. The importance of each heading under history taking was thoroughly dissected. Exposure of the patient to any allergens, drugs, changing environmental conditions, pollutants, chemicals, or any pathogen may guide the clinical practitioner to a probable conclusion.</i></p> <p><i>Furthermore, the importance of the role of vectors in the causation of disease along with the discussion of the National Vector Borne Disease Control Programme was discussed in Community Medicine {Competency CM3.6}.</i></p>	

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?	
4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	No, there are no improvements to planetary health education in progress.
<p><i>Score explanation:</i></p> <p><i>With the strict implementation of the NMC UG Curriculum in the past 3 years, there has been a significant increase in the integration of planetary health topics in the core medical school curriculum. Most of the aforementioned planetary health topics have been integrated into our medical school curriculum in the past 4 years.</i></p>	

Moreover, our institution has conducted several seminars and workshops regarding climate changes in the past decade(some of whose aim has been or is being implemented into action ,) some of them being

- “Conference on climate change in the Eastern Region of India [CEERI-2013]”, dated 2013
- Climate change and our response for Sustainable Development dated 2017
- Lecture on Climate Change by Mr. Erik Solheim, UN Under Secretary General and Executive Director, UN Environment dated 2017
- Lecture on Crop Productivity to Climate Stability: The Journey Of Carbon The Atom of Life by Dr. Himanshu Pathak, FNA, Director Tyndall Center for Climate Change Research, Norwich, UK
- One Day National Webinar on “Challenges for NSS Volunteers in Climate Change :An initiative from KISS and KIIT NSS Bureau.
- UN75 Campaign: Webinar on Recalibrating Education, Inclusion and Climate Change post Covid -19
- International Conference on “Living Sustainability In Harmony With nature” ’WED 2022’
- KIMS Student Seminar on Epidemiology Climate Change”Shifting epidemiology of communicable and non communicable diseases due to climate change”
- Seminar on the theme of “Climate Change And Indian Agriculture” and many more.

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

*Score explanation: Most of the aforementioned planetary health/ESH topics have been longitudinally integrated into the Undergraduate medical curriculum of KIMS.
To highlight the longitudinal integration of planetary health, here are a few examples:
In the first year curriculum of biochemistry, the effect of pollutants, oxidants and free radicals, radiations, and other chemicals leading to DNA and genetic alterations and mutations were extensively discussed.
In the first-year undergraduate curriculum, the students are taken into the community settings and are taught and made to practise environmental sustenance activities which is a part of the curriculum.
In the second year curriculum of pathology, a chapter on Neoplasia discusses the various agents causing cancers elaborately.
Furthermore, there are alternate lectures on designated topics (like waste management, alternate sources of energy and their effects on the environment etc). Various campaigns and programmes are also initiated based on this topic.*

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	Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare
0	No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.
<i>Score explanation: In our institute KIMS, there is a dedicated wing with faculty looking into 'Climate Change And Environmental Wellness' and its curricular integration.</i>	

Section Total (54 out of 72)	75%
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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 medical school who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the medical school who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution , but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation:</i></p> <p><i>KIMS does have individual faculty members conducting research related to healthcare sustainability. For example, the Department of Community Medicine of KIMS has published articles, ‘Public-private share in maternal health care services utilization in India: A multinomial logistic regression analysis from three consecutive survey data’ in the <u>Clinical Epidemiology and Global Health Journal</u> in 2019, and ‘Epidemiologic Correlates of Chronic Respiratory Infections in Adults an Urban Slum of Bhubaneswar, Odisha, India’ in the <u>Global Journal of Health Science</u> in 2017. On the University level, The KIIT School of Public Health has published an article ‘Planetary health and the role of Community Health workers’ (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7567207/) in <u>PubMed Central</u> in 2020, The KIIT School of Biotechnology has published article, ‘A single functionalized graphene nanocomposite in cross flow module for removal of multiple toxic anionic contaminants from drinking water’ (https://link.springer.com/article/10.1007/s11356-023-26937-y) in <u>Environmental Science and Pollution Research Journal</u> in 2023, The KIIT School of Civil Engineering has done a sanctioned project by the <u>Indian Council of Social Science Research</u> on ‘Contamination testing of Groundwater in Bhubaneswar Urban’ (https://ymerdigital.com/uploads/YMER220441.pdf and https://icssr.org/social-determiners-water-inequity-systematic-investigation-bhubaneswar) in 2019 to name a few.</i></p>	

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

3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years.
1	There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.

Score explanation: The university that KIMS is a part of Kalinga Institute of Industrial Technology (KIIT) University, has the KIIT School of Public Health (<https://ksph.kiit.ac.in/>) which has course objectives for planetary health, global health and common health conditions in India. The KIIT School of Biotechnology is also involved in research related to planetary health and sustainability. There also exists a department (<https://sustainability.kiit.ac.in/>) which focuses on providing an ecosystem for good health and well-being. The University has overall report of sustainability activities. (<https://sustainability.kiit.ac.in/wp-content/uploads/2023/11/KIIT-Overall-SDG-Report-2022.pdf>). To name a few interdisciplinary planetary health research projects carried out by the KIIT University:

- *The KIIT School of Public Health has a published article ‘Planetary health and the role of Community Health workers’ (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7567207/>) in PubMed Central in 2020*
- *The KIIT School of Biotechnology has published article, ‘A single functionalized graphene nanocomposite in cross flow module for removal of multiple toxic anionic contaminants from drinking water’ (<https://link.springer.com/article/10.1007/s11356-023-26937-y>) in Environmental Science and Pollution Research Journal in 2023*
- *The KIIT School of Civil Engineering has done a sanctioned project by the Indian Council of Social Science Research on ‘Contamination testing of Groundwater in Bhubaneswar Urban’ (<https://ymerdigital.com/uploads/YMER220441.pdf> and <https://icssr.org/social-determiners-water-inequity-systematic-investigation-bhubaneswar>) in 2019.*

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

Score explanation: The Department of Community Medicine of KIMS has family adoption and wellness programmes where the community members impacted by climate, for example, cyclones or flood; or in terms of health hazards like diarrhoea or typhoid are consulted either in the urban health centres or the

rural health centres. KIMS along with KIIT University has developed wellness clinics (<https://kiit.ac.in/community-engagement/> and <https://sustainability.kiit.ac.in/good-health-and-well-being/>) in the state's capital city of Bhubaneswar and numerous other areas. These clinics offer naturopathic treatment, counselling, rehabilitation, and de-addiction therapy services. KIMS and the KIIT University also have integrative programmes with the Kalinga Institute of Social Sciences and its students by carrying out activities related to climate change and global health. In the RHCs or UHCs, the students (undergraduates and postgraduates) interact and communicate with communities where they give their input and outlook. However these programmes do not stress upon interdisciplinary research or the process of including communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda.

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

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

Score explanation: The KIIT Deemed to be University has a Sustainability Webpage (<https://sustainability.kiit.ac.in/>) which serves as a testament to climate action and sustainability, showcasing the various initiatives, projects, and research endeavours undertaken by the university. There are research labs on sustainability (<https://sustainability.kiit.ac.in/sustainability-development/>) which are committed to conducting research on environmental sustainability contributing towards the curriculum development, teaching and supervision of undergraduate and postgraduate programs. The KIIT School of Public Health (<https://ksph.kiit.ac.in/>) also has sections related to topics of planetary health and environment. The KIIT University also has a sustainability and climate action policy that encompasses a diverse range of key areas, including environmental stewardship, energy efficiency, sustainable transportation, education and awareness, collaboration and partnerships, monitoring and reporting. (<https://sustainability.kiit.ac.in/climate-plan/>).

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

4	Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.

1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.
<p><i>Score explanation:</i></p> <p><i>The KIIT University (the institute) has hosted several conferences on topics related to planetary health:</i></p> <ul style="list-style-type: none"> • <i>International Conference on Management Research on theme - Embracing Sustainability, Diversity, and Inclusivity in 2024.</i> • <i>International Water and Waste Management Conference in 2023.</i> • <i>International Conference on Sustainability and Equity in 2022.</i> • <i>Climate Change and our response for Sustainable Development in 2017.</i> 	

2.6. Is your <u>medical school</u> a member of a national or international planetary health or ESH organisation?	
1	Yes, the medical school is a member of a national or international planetary health or ESH organisation
0	No, the medical school is not a member of such an organisation.
<p><i>Score explanation: No, the medical school is not a member of such an organisation.</i></p>	

Section Total (11 out of 17)	64.71%
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Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Community Outreach and Advocacy

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

3.1. Does your medical school partner with community organisations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organisations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organisation to promote planetary and environmental health.
1	The institution partners with community organisations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Score explanation: KIMS spreads awareness for planetary health by organising a variety of programmes, and campaigns like teaching about climate change in local schools, and health professionals sharing their patient climate health stories with a local advocacy organisation to enable more effective lobbying and indulging students both on and off campus. It also collaborates with local communities to promote eco-friendly initiatives to create a greener environment on campus and beyond. Gram Vikas is a NGO that promotes sustainable development in rural areas, partners with the university and spread awareness also about planetary health and environmental health</i></p>	

3.2. Does your medical school offer community-facing courses or events regarding planetary health?	
3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The institution/medical school have not offered such community-facing courses or events.
<p><i>Score explanation: The department of Community Medicine with other departments organises Community events like- nukkad Natak, role plays, street shows and flash mobs both in the urban and</i></p>	

rural areas of its field practice, areas of topics of public Health relevance, and also on environmental sustainability and protection.

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

Score explanation: Planetary health and sustainable healthcare topics are sometimes included in the update communications along with the regular schedule, like 'destruction of biodiversity can create condition for new disease like covid-19.' Guest lectures are conducted by kims both for students and professors to educate about more such possibilities.

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

Score explanation: There are no such accessible courses for post-graduate providers.

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

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

Score explanation: No affiliated hospitals have accessible educational materials or brochures for patients.

However, some affiliated hospitals provide information about environmentally related health hazards. The people who live close to any chemical industry, or nuclear power plants are at more risk of suffering from occupational disorders such as interstitial lung disease, and pneumoconiosis, such people are being educated about how to take prevention and be safe.

3.6. Does your medical school or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?

2	Yes, the medical school or all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated hospitals have accessible educational materials for patients.
<i>No affiliated hospital has any accessible educational material for patients</i>	

Section Total (6 out of 14)

42.86%

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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 medical school or institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school or 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.
0	No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.
<p><i>Score explanation: Yes, our medical school KIMS provides support for medical students interested in enacting a sustainability initiative/QI project through intramural funding. Interested students work on their research projects under a Guide and the Guide puts forth the proposal before the Research Committee. On getting the approval for the project, the institute provides funding to the student to carry out the project.</i></p>	

4.2. Does your <u>institution</u> offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these require student initiative to seek these out and carry them out in their spare time.
0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.
<p><i>Score explanation: At Undergraduate level, opportunities are offered for medical students by our institution to carry out research. Students are selected for the ICMR (Indian Council of Medical Research) STS (Short Term Studentship) Program under which they receive funding by ICMR for 2 months to carry out their research project under a Guide.</i></p>	

4.3. Does the <u>medical school</u> have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors	
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within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
2	The medical school has a web page with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.

Score explanation: Yes, our Medical college has a webpage: <https://kims.kiit.ac.in/research/#> where there is some information about the projects about sustainable healthcare which have been approved and are underway. But the information provided is not sufficient. The projects are mainly carried out by the faculty members of various departments and not by students.

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

Score explanation: There is no such student organisation dedicated to planetary health or sustainability in healthcare. However, the Academic Society of KIMS is a registered student group supported by the faculty of our medical college. It conducts integrated seminars on various topics. In 2022, a student seminar on “Shifting epidemiology of communicable and non-communicable diseases due to climate change” was conducted by the Academic Society. Another seminar on “Air Pollution: Health Hazards and Prevention” was also conducted.

4.5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.

Score explanation: There is a KIMS Curriculum Committee at our Medical college which consists of faculty members, the Principal of KIMS as the chairman and a student representative. Meetings are held to discuss Curriculum design and changes to be made when required.

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

1	Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.
1	Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
1	Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.
1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
1	Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)

Score explanation:

- *Our institution KIIT University (Kalinga Institute of Industrial Technology) conducts various activities under topics like 'Climate Change', 'Climate Sustainability' and 'Climate Education and Awareness'. KIIT has its webpage for this: KIIT Sustainability.*
- *There are multiple student-led societies at the university level which engage themselves in various activities such as conducting seminars for students, awareness programs, drives for sustainable practices and many other activities. Kimaya is the medical society of KIIT which conducts various health awareness programs.*
- *Many guest lecture sessions are conducted.*
- *At KIMS, the Community Medicine Department conducts 'Family Adoption Program' under which, MBBS students starting from the 1st year itself are assigned families in a nearby slum at Niladri Vihar, Bhubaneswar. These slums are registered under the KIMS UHTC (Urban Health Training Centre). The students need to evaluate the socio-economic and health status of the assigned family and also evaluate various challenges faced by them. Under this program, students also evaluate the environment and sanitation of the surroundings in which they live and hence, point out the various health hazards that can affect the people of that community.*

Section Total (7 out of 15)

46.66%

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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 at least one designated staff member for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff , but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Score explanation: We could not identify specific salaried staff members or task force responsible for overseeing campus sustainability.</i></p> <p><i>However, KIIT University's Sustainability/Climate Action Policy encompasses various areas, including environmental stewardship, energy efficiency, sustainable transportation, education and awareness, collaboration and partnerships, monitoring and reporting, and the goal of reaching carbon neutrality by 2050. By implementing this policy, KIIT aims to reduce their environmental impact, conserve resources, and inspire positive change within their community and beyond.</i></p> <p><i>Furthermore, KIIT University has established a Centre of Excellence for Sustainability and Equity to create awareness among its students, staff and general public about the needs and importance of sustainable development goals, its importance and impact on the progress of our nation. This Center of Excellence is working on gathering, measuring and analyzing data related to different sustainable development goals both at national level and international through its collaborations, partners, NGOs, surveys and research activities. It is also working towards more collaborations at national and international level, NGOs and corporate to frame policies and decide on plan of action to meet the goals. The following committee has been set up to review the progress made by the Center of Excellence and provide necessary advice.</i></p>	

5.2. How ambitious is your <u>institution/medical school</u> plan to reduce its own carbon footprint?	
5	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2030

3	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2040
1	The institution/medical school has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate
0	The institution/medical school does not meet any of the requirements listed above
	<p><i>Score explanation:</i> <i>KIIT University has written, approved and successfully implemented plans to keep its carbon emissions in line with GHG's Protocol Corporate Standard and attain carbon neutrality, set in motion from 2014.</i></p> <p><i>KIIT University's Sustainability/Climate Action Policy, is a blueprint that embodies its commitment to combating climate change and fostering sustainability throughout our institution. This policy encompasses a diverse range of key areas, including environmental stewardship, energy efficiency, sustainable transportation, education and awareness, collaboration and partnerships, monitoring and reporting. At the heart of its efforts lies the ambitious goal of achieving carbon neutrality by 2050.</i></p> <p><i>More information at https://sustainability.kiit.ac.in/climate-plan/</i></p>

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

3	Yes medical school buildings are 100% powered by renewable energy
2	Medical school buildings source >80% of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source >20% of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.
	<p><i>Score explanation: KIIT, University and hence KIMS, is committed to increasing its use of renewable energy sources. It explored opportunities to install on-site renewable energy systems, such as solar panels or wind turbines, and actively seek partnerships with local renewable energy providers. Its goal is to make a transition to a sustainable energy mix and reduce dependence on fossil fuels. By increasing the share of renewable energy in our energy supply, KIIT will contribute to its goal of reaching carbon neutrality by 2050. In the last 5 years, the total energy generation through KIIT's solar PV systems is 4782151 kWh. The University's plan is to incorporate other types of renewable sources such as from Wind Power, Fuel Cells, etc. The University intends to procure more power from utilities sourcing renewable power than fossil fuels.</i></p> <p><i>Moreover, KIIT University saved 10,273,000 kWh units of energy in the year 2022 by utilizing sustainable energy consumption practices. The State Government of Odisha has recognized KIIT University in the category "Educational Institute - Best Performance in the field of Energy Saving and Conservation" for our exceptional commitment to energy saving in the year 2022. The University has committed to enhance its current energy-saving and conservation projects in the upcoming years.</i></p>

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

Score explanation:

Sustainability in structural and construction management at KIIT Deemed to be University:

- *Cost Effective construction technologies*
- *Innovative construction methods*
- *Sustainable design and construction*
- *Green Concrete*
- *Sustainable materials and construction*
- *Utilisation of waste in concrete*
- *Composite and sandwich structures*
- *Offshore structures*
- *Earthquake engineering and structural dynamics*
- *Structural health monitoring*

Furthermore, the use of energy-efficient light sources in the new buildings, the use of capacitor banks to improve overall power factor and reduce electricity waste, the replacement of conventional motors with modern, high-efficiency motors, the upgrading and routine maintenance of air conditioning systems for low power consumption, and the implementation of IoT-based smart lighting systems are major initiatives.

In addition to sustainable building practices, KIIT Green is an initiative to control environmental pollution in 25 sq. km where KIIT campuses are located. Initiatives include plantation drives, paperless administration, annual Green Audit, and prohibition of two-wheelers on campus.

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

0	The medical school or institution has not implemented strategies to encourage and provide environmentally-friendly transportation options.
<p><i>Score explanation: Biking, walking, carpooling, and using public transportation are all forms of alternative mobility that the KIIT University supports and encourages. The reliance on single-occupancy automobiles has been lessened and a culture of sustainable mobility is being promoted by providing infrastructure and incentives for these alternatives. The number of electric vehicles used by the KIIT University is growing yearly. By 2030, KIIT wants a higher proportion of people in their community to use alternate forms of transportation.</i></p> <p><i>One of the most important components of KIIT's sustainable mobility plan is the uptake of electric vehicles (EVs). Within KIIT, the usage of electric fleet vehicles is prioritised and investments in EV charging infrastructure are made. Additionally, we inform and entice employees and students to think about EVs for their own transportation requirements.</i></p> <p><i>Green vehicles (powered by solar energy and an electric battery) have been built by the University's automobile society and the KIIT student research centre for use in campus transportation and for conducting green vehicle research. Their goal is to have 70% of their fleet battery-operated by 2030.</i></p>	

5.6. Does your <u>medical school</u> have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass) ?	
2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.
<p><i>Score explanation: Composting is practised for food wastes, used paper napkins, pads, wet garbage, etc.</i></p> <p><i>Electronic recycling is done by disassembling old and obsolete computer systems, and electronic and equipment, identifying and cataloguing functional subcomponents, circuits, ICs, and SoCs for use in student projects.</i></p> <p><i>Awareness programs on electronic waste recycling are also being carried out.</i></p> <p><i>ENACTUS KISS-KIIT -Under the initiative, in 2016, Project SIDDHI was undertaken, which provided an opportunity to the oppressed communities in and around Bhubaneswar to change their lives for the better and, in the process, eliminate the use of plastic bags by replacing them with handmade paper bags.</i></p>	

5.7. Does the <u>medical school</u> apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
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3	Yes, the medical school has adequate sustainability requirements for food and beverages, including meat-free days or no red-meat, and is engaged in efforts to increase food and beverage sustainability.
2	There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is engaged in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is not engaged in efforts to increase food and beverage sustainability.
0	There are no sustainability guidelines for food and beverages.
<p><i>Score explanation: KIIT Deemed to be University follows 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. However the sustainability guidelines are insufficient and optional.</i></p>	

5.8. Does the <u>medical school</u> or <u>institution</u> apply sustainability criteria when making decisions about supply procurement?	
3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is engaged in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is not engaged in efforts to increase sustainability of procurement.
0	There are no sustainability guidelines for supply procurement.
<p><i>Score explanation: KIIT Sustainable Procurement Policy as on 16th November 2022 is - Sustainable Procurement Principles :</i></p> <ul style="list-style-type: none"> <i>We shall prioritise products and services that have a lower environmental impact, including those with reduced energy consumption, resource-efficient materials, and eco-friendly packaging.</i> <i>All equipment, machinery and items procured should have been assessed to have minimum negative impact on environment, pollution and lifestyle of the students and staff as well as community living around the University, and should be aligned with the Environmental Policy of the country.</i> <i>Recycling of materials and wastes in the University should be maximised to cut down the demand index and promote green technologies in different operations of the University.</i> <i>Procurements and use of paper and ink should be minimised through use of digital platforms, networking and process automation.</i> 	

5.9. Are there sustainability requirements or guidelines for events hosted at the <u>medical school</u>?	
2	Every event hosted at the medical school must abide by sustainability criteria.

1	The medical school strongly recommends or incentivizes sustainability measures, but they are not required .
0	There are no sustainability guidelines for medical school events.
<i>Score explanation: KIIT Deemed to be University strongly incentivizes sustainability measures but they are not required.</i>	

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

5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?	
4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	The institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.
<p><i>KIIT deemed to be University lays high emphasis on the United Nations SDG (Sustainable Development Goals). The Committee on Sustainability and Equity refrains from making any investments towards and for any organisations dealing with -</i></p> <ol style="list-style-type: none"> <i>1.Intoxicants</i> <i>2.Weapons</i> <i>3.Environmentally harming wastes.</i> <p><i>KIIT deemed to be University will make investments towards:</i></p> <ul style="list-style-type: none"> ● <i>E-Governance, process automation and smart campus initiatives.</i> ● <i>Quality Education and Impactful research</i> ● <i>Innovation and Infrastructure Development</i> ● <i>Good health and well being</i> ● <i>Social outreach and empowerment of tribal communities</i> ● <i>Clean water and sanitation</i> 	

- *Environmental protection*
- *Affordable and clean energy*
- *Preservation and protection of life below water and land*
- *Promoting peace, justice and equality in society.*
- *Recycling of materials and wastes in the University should be maximised to cut down the demand index, carbon footprint and promote green technologies in different operations of the University.*

Section Total (19 out of 32)

59.38%

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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 Kalinga Institute of Medical Sciences [KIMS]

The following table presents the individual section grades and overall institutional grade for the Kalinga Institute of Medical Sciences on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(54/72) \times 100 = 75\%$	B+
Interdisciplinary Research (17.5%)	$(11/17) \times 100 = 64.71\%$	B-
Community Outreach and Advocacy (17.5%)	$(6/14) \times 100 = 42.86\%$	C-
Support for Student-led Planetary Health Initiatives (17.5%)	$(7/15) \times 100 = 46.67\%$	C
Campus Sustainability (17.5%)	$(19/32) \times 100 = 59.38\%$	C+
Institutional Grade	59.88	C+