

Planetary Health Report Card: Imperial College London



2020-2021 Contributing Team:

- Students: Giulia Iacona (gmi18@ic.ac.uk), Xinyu Ye (xy7118@imperial.ac.uk)
- *Primary Contact: Giulia Iacona, (gmi18@ic.ac.uk)

Summary of Findings

Curriculum

While the majority of core teaching in the MBBS curriculum doesn't have a focus on climate change and sustainability, we believe that with the Curriculum review, Imperial College School of Medicine (ICSM) are integrating and embedding more teaching about Planetary Health. The new elective student selected component (SSC) in Year 1 and 2 give students the opportunity to learn new and different aspects of Sustainable Healthcare and Planetary Health. We believe that more efforts need to be made to integrate more sustainability topics and have lectures dedicated to them rather than just being mentioned in the learning outcomes (LOS).

Looking to the future, as the new curriculum develops, it is important to ensure these topics are integrated throughout the whole curriculum.

Interdisciplinary Research

Imperial is committed to supporting and funding environmental and sustainability research, as evidenced by its Grantham Institute - Climate Change and the Environment which focuses on research for Climate Change and Environment topics. Nevertheless, there is still a lack of research towards planetary health. In particular there needs to be more focus on the inclusion of communities disproportionately impacted by climate change and environmental injustice in the research agenda, and more visibility should be given to planetary health by organising conferences on such topics.

Community Outreach and Advocacy

While Imperial has various initiatives, at institutional level, for students and the wider public to introduce concepts such as veganism and the beneficial impact on both health and the planet, ICSM lost points as it does not offer accessible educational materials for patients about climate change, health impacts and environmental health exposures. This is where we feel the School of Medicine and its partner hospitals has scope for improvement.

Support for Student-Led Initiatives

Imperial supports and encourages student-led initiatives through funding, offering and/or advertising opportunities, nevertheless these opportunities remain general and are not specifically related to sustainability and planetary health. Furthermore, ICSM lost points due to the lack of co-curricular planetary health programs or initiatives.

Sustainability

Undoubtedly Imperial's strongest point. The Institution and the School of Medicine are both doing a great job in keeping with their objective to be a net zero carbon institution by 2040 and to achieve the ISO14001 Environmental Management standard. Imperial has already started divesting from fossil fuels, but we wish to see in the upcoming years a complete divesting from fossil fuels. Furthermore, ICSM is adopting sustainable building practices on the medical school campus, in particular with the new School of Public Health on the White City Campus, which is going to be BREEAM excellent. Imperial is also advertising the great recycling campaigns available to staff and students on campus. Nevertheless, more and compulsory sustainability criteria for events organised by ICSM could be put in place.

C+

C

C-

C+

A-

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance defines planetary health as "a field focused on characterizing the human health impacts of human-caused disruptions of Earth's natural systems." This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanization, 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 color, 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 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 centered on environmental health impacts 5) medical school campus sustainability.

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 change. Therefore, it is critical that medical students are trained to understand the health effects of climate change, as well as planetary health more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.

Curriculum: General

1. Did your medical school offer elective courses 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.
In Year 1, students during their Lifestyle and Medicine Prevention course have to choose one Student Selected Component (SSC). One of the options is to take the Nutrition courses that focuses on how nutrition can help prevent disease and the beneficial impact of a vegan diet both on the planet and on an individual's health.	
One of the iBScs offered at Imperial is Global Health which integrates teaching about Planetary Health.	

Curriculum: Health Effects of Climate Change

2. Does your medical school curriculum address the relationship between extreme temperature health risks and climate change, as well as the socioeconomic/racial disparities in extreme heat exposure?

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.

In Year 4, in the Global Health curriculum there are multiple lectures that address Climate Change and its impact on Global Health. In particular, there is one lecture given by Paolo Vineis called "Climate change and heath waves" that explores the relationship between extreme temperature health risks and climate change. Another lecture given by Kris Murray called "Climate Health" explores the changes in temperature due to global warming and its effect on human health. This also relates to one of the Learning Objectives of Year 4 which is:

- "Explain the impact of climate change, conflict and other natural and anthropogenic events on the health of vulnerable populations around the world"

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.	
In Year 4, there is one lecture given by Paolo Vineis called "Climate change and heath waves" that explores the relationship between extreme temperature health risks and climate change. Another		

explores the relationship between extreme temperature health risks and climate change and nearly waves that explores the relationship between extreme temperature health risks and climate change. Another lecture given by Kris Murray called "Climate Health" explores how the changes in our climate (from temperature, to flooding and droughts) are impacting access to healthcare but also the impact it has on individual's health. Furthermore, this topic is also briefly mentioned in one of our learning outcomes for Year 4:

- "Explain the physiological and pathophysiological changes occurring in environments of extremes in pressure and temperature"

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.
While there is not a specific lecture regarding this topic it is briefly mentioned in one of our learning outcomes for:	

- Year 1:

"Infectious disease burden: identify the current burden of infectious diseases and their disparities worldwide; list the commonest infectious causes of world mortality and recall causes underlying their high incidence"

- Year 5:

"Epidemiological impact: explain the geographical patterns of infectious disease and recognise the most common infectious agents causing high disease burden"

5. Does your medical school curriculum address the cardiorespiratory health effects of climate change, including 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.

While there is not a specific lecture regarding this topic, it is briefly mentioned in one of our learning outcomes for

- Year 3

Patient factors: identify factors (psychological, sociological) that may be contributing towards a patient's illness, the course of the disease and the success of treatment (including health inequality, occupational factors, poverty, affluence).

- Year I

Public reports on inequality: demonstrate an awareness of key reports on health inequalities in the UK.

- Year 2

Explain the concept of health inequalities: the socio-economic, environmental and cultural factors which determine health and access to healthcare.

6. 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.

During the Student Selected Component of Mental Health in the Lifestyle and Prevention Medicine course in Year 1, one of the lectures focuses on mental health and the environment. The lecture is titled "Nature, the Environment and Mental Health" and is facilitated by Dr. Lawrance and Pip Batey. During this SSC students also received a presentation by Lawrance about her research project entitled "Melting Minds: Does Climate change impact mental health?" and a presentation by Dr. Jennings about his research entitled "Co-benefits of climate and environmental action on mental health".

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

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

In Year 1 students during their Lifestyle and Medicine Prevention course have to choose one Student Selected Component. One of the options is to take the Nutrition courses that focuses on how nutrition can help prevent disease and the beneficial impact of a vegan diet both on the planet and on an individual's health. The course addresses in detail the relationships between health, individual patient food and ecosystem health, and climate change.

During Year 4 for students in the Global Health course a lecture given by Kris Murray called "Climate Health" explores the effects of climate change on health and how sustainable diets and eating less meat could help prevent extinction, climate change, cancer and the next pandemic. Within the lecture, topics such as unsustainable fishing and the meat industry are discussed.

8. Does your medical school curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, 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.

While there is not a specific lecture regarding this topic, it is briefly mentioned in one of our learning outcomes for Year 3:

"Health development & service policy: evaluate the principles underlying the development of health and health service policy, including issues relating to health economics and equity, and clinical guidelines"

9. Does your medical school curriculum address the unequal 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.

In the Year 2 Lifestyle and Prevention Medicine course there is a Global Health Module that explores the UN Sustainable Developments Goals and how climate change unequally impacts health across the globe.

In the Year 1 Lifestyle and Prevention Medicine course in the student selected Mental Health component, one of the lectures focuses on mental health and the environment and how differently impacted some parts of the world are. The lecture is titled "Nature, the Environment and Mental Health" and is facilitated by Dr. Lawrance and Pip Batey.

While in Year 3 there is not a specific lecture regarding this topic, it is briefly mentioned in one of our learning outcomes for Year 3: "Explain the impact of climate change, conflict and other natural and anthropogenic events on the health of vulnerable populations around the world."

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

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

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

In the Year 2 Reproduction, Development and Ageing Module the lectures cover how teratogens, including pesticides, can influence embryo development. Relating to this in Year 2 we have 2 learning objectives relating to this:

- *Teratogens: summarise how teratogens affect embryo development.*
- Fetal growth: recognise the factors which influence fetal growth and the overlap between normal and abnormal fetal growth.

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

- 2 This topic was briefly covered in the core curriculum.
- 1 This topic was covered in elective coursework.

0 This topic was not covered.

Yes, in the Lifestyle and Prevention Medicine Course in Year 2 there is a lecture titled "How might climate change influence Human Health in London?".

12. Does your medical school curriculum address the unique climate and environmental health challenges that have impacted and are impacting Indigenous communities? 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. No, this topic is not currently covered in either the core curriculum or elective coursework.

13. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, 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.

While there is not a specific lecture regarding this topic it is briefly mentioned in our learning outcomes for Year 2:

- Inequality: explain the impact of key dimensions of inequality, and discrimination and marginalisation on health, illness and disease; evaluate explanations for the existence of health inequalities, including cultural, materialist, psychosocial and social selection.
- Determinants of health: outline the social and environmental determinants of child health in the UK and abroad.

- Explain the concept of health inequalities: the socio-economic, environmental and cultural factors which determine health and access to healthcare.
- Definitions of health inequality and key social determinants: recall the definition of social class, socioeconomic status, gender, sexuality, ethnicity, age and disability.

Curriculum: Sustainability

14. 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.

In Year 1 students during their Lifestyle and Medicine Prevention course have to choose one Student Selected Component. One of the options is to take the Nutrition courses that focuses on how nutrition can help prevent disease and the beneficial impact of a vegan diet both on the planet and on an individual's health.

15. Does your medical school curriculum highlight the waste generated by the healthcare system and identify ways to advocate for and implement sustainable best practices in health care?

- 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.

In the Lifestyle and Prevention medicine course in Year 2 (new curriculum) one of the modules is called "An Introduction to Quality in Health Care and Health Systems". In this module students are introduced to the concepts of Sustainability and Quality Improvement and how these two intertwine in Sustainable Healthcare. During this module students reflect about the environmental impact of any healthcare intervention and approaches to reduce these, such as reducing the healthcare sector's carbon footprint or reducing the bio-accumulation and toxicity of chemicals entering the environment.

Curriculum: Clinical Applications

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

No, this topic is not currently covered in either the core curriculum or elective coursework.	
0	No, there are not strategies introduced for having conversations with patients about climate change
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.

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

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

In Year 2 (old curriculum), during the Foundation of Clinical Practice, there is a Clinical Communication module where students are trained in taking a full history including a social history, which includes asking patients about occupation and housing to look for any possible exposure hazards, especially when taking a respiratory history. This included discussion about asking patients questions about their living circumstances, occupation, hobbies, habits and travel history. Students are taught to consider the impact of certain environmental exposures such as pesticides, heavy metals, toxic synthetic chemicals, air pollution and urban living environments.

In Year 3, during the Public Health and Epidemiology Course, students are taught and expected to learn how to "recognise the role of environmental and occupational hazards in ill-health and discuss ways to mitigate their effects".

In Year 5, one of the learning objectives includes "Adolescent History: demonstrate the ability to take, summarise and record an adolescent history including home & environment, education & employment, activities, drugs, sexuality, suicide/depression".

Curriculum: Administrative Support for Planetary Health

	18. Is your medical school currently in the process of 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.

The Imperial College Medical School has recently undergone a major curriculum review. In this curriculum review there has been the introduction of a new module called Lifestyle and Prevention Medicine in which students will explore and reflect on topics such as Health Coaching, Global Health and Governance as well as Epidemiology. In this new module, that continues in Year 2, students are introduced to Planetary Health and One Health, and Sustainable Health Care.

While this is a significant improvement, as these topics were absent from the previous curriculum, we believe there is still a margin for these topics to be explored more and have a bigger role in the student's medical education. Nevertheless, the School of Public Health is working closely with faculty in order to have a bigger space in the curriculum.

19. 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.

The Imperial College Medical School has recently undergone a major curriculum review that has been implemented for the 2019 cohort. For this reason we believe this metric might need review in the upcoming years as we do not know as of yet what ESH and Planetary Health Teaching is going to be after Year 2 in the new curriculum. The School of Public Health is closely working with faculty in order to have a greater emphasis in the curriculum for Sustainable Healthcare topics.

As of today, ESH and Planetary Health is covered in both Year 1 and Year 2 of the new curriculum. In the old curriculum topics such as environmental and occupational hazard exposure are well integrated throughout the curriculum but, we believe those topics alone aren't enough coverage of ESH/Planetary Health.

20. Bonus: Does your medical school have a program that offers incentives for faculty/departments to develop new planetary health/ESH courses and/or incorporate planetary health/ESH into existing courses?

- 1* Yes, the medical school has an incentive program.
 - 0 No, the medical school does not have an incentive program.

The Imperial College Medical School has recently undergone a major curriculum review that has been implemented for the 2019 cohort. The new Lifestyle and Prevention Medicine course has been

implemented and introduces students to concepts such as Planetary Health and ESH. The faculty of the School of Public Health is closely working with faculty in order to have a greater emphasis in the curriculum. Nevertheless, we are not aware of any incentive or programs available for faculty to develop new planetary health / ESH courses.

Section Total (30 out of 58)

Interdisciplinary Research

<u>Section Overview:</u> 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 emphasized.

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
4	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health and healthcare sustainability.
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in a planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the School of Medicine who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution, but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
	e is a moderate number of researchers at the Faculty of Medicine at Imperial working on etary health. Dr Kris Murray working on research topics such as climate change and infectious diseases, health co-benefits of environmental interventions and open-learning: massive open online courses (MOOCs) on climate change and health. Dr Daniela Fetch working on research topics such as geographical variations in population

- Dr Daniela Fetch working on research topics such as geographical variations in population health, with particular focus on urban systems; and environmental and health inequalities.

It is worth noting that Imperial has the The Grantham Institute - Climate Change and the Environment which focuses on research for climate change and environment on a whole different range of topics, some of which are related to planetary health such as:

- Impact of air pollution on population health and hospital admissions by Dr Laure de Preux.
- Environmental determinants of infectious disease transmission / Malaria / Dengue risk by Dr Ruiyun Li.

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

3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years.
1	There is an Occupational and Environmental Health department, but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.
Imperial has the The Grantham Institute - Climate Change and the Environment which focuses on research for climate change and environment with researchers from different backgrounds on a whole different range of topics, some of which are related to planetary health such as:	

- Impact of air pollution on population health and hospital admissions by Dr Laure de Preux.
- Environmental determinants of infectious disease transmission / Malaria / Dengue risk by Dr Ruiyun Li.

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

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

No, there is currently no process at the medical school.

4. Does your institution have a planetary health website, or a website centralizing various campus resources related to health and the environment?
 3 There is an easy-to-use, adequately comprehensive website that centralizes 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 centralize 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.

Yes, Imperial has one website called <u>Transition to Zero Pollution</u> centralising various campus resources related to health and the environment and compiles research, education, and event opportunities at the institution along with opportunities on campus for staying green such as the vegetarians/vegan restaurants.

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

4	Yes, the institution has hosted more than one conference or symposium on topics related to planetary health in the past year, including at least one on climate change.
3	Yes, the institution has hosted 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.
No, to our knowledge Imperial College has not recently hosted a conference or symposium on topics related to planetary health.	

6. Has your institution or medical school joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education?

2	Yes, the medical school has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education.
1	Yes, the institution has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education, but the medical school specifically has not.
0	No, the institution has not joined the Planetary Health Alliance or the Global Consortium on Climate and Health Education.
No, neither Imperial College London nor the School of Medicine have joined the Planetary Health	

No, neither Imperial College London nor the School of Medicine have joined the Planetary Health Alliance (PHA) or the Global Consortium on Climate and Health Education.

Section Total (9 out of 19)

9

Community Outreach and Advocacy

<u>Section Overview:</u> 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 color. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.

1. Does your medical school partner with community organizations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	The institution partners with community organizations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
they com (CBC colla <u>Com</u> com train part	students that choose to intercalate in Global Health (intercalation is mandatory for ICSM students) have a Community Group Placement (CGP) scheme in order to develop social accountability and nunity engagement skills. All CGP partner organisations are community-based organisations D) working with our local communities across London. In 2020 the School of Public Health borated with 10 Community based organisations for the CGP. For example the Hammersmith <u>munity Gardens Association (HCGA)</u> is a local environmental charity that manages several nunity gardens in Hammersmith and Fulham with a range of projects including conservation ing schemes, volunteer gardening sessions, and health and wellbeing projects. ICSM has also herships with Myatt's Fields Park Project, The Abbey Centre, and Baraka Youth Association where ents have the opportunity to collaborate with them for their CGP.

2. Does your medical school offer community-facing courses or events regarding planetary health?

3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.

- 1 The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
- 0 The medical school has not offered such community-facing courses or events.

Imperial College hosts a series of late night talks called Imperial Lates, with a different topic each week. During these events (pre-Covid-19) everyone from students, faculty and members of the public were welcome to join and directly meet researchers. One of the topics was "Food for Thought". In the past there have been talks such as "Green cuisines: Tasty plant-based food that's good for you and the planet". Even though these events are not primarily organized by the medical school itself faculty members and researchers from ICSM are often involved.

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

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

No, there are no regular updates on planetary health and/or sustainable healthcare communicated to students by the university. Nevertheless medical students receive regular updates on events, important research and among other things updates on planetary health or topics related to it are sometimes included.

Although, it is possible for students to subscribe to the <u>Sustainable Imperial Newsletter</u> if they wish to do so. We believe this should be more highlighted by the University.

4. Do hospitals affiliated with your medical school have accessible educational materials for patients about environmental health exposures?	
2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centers have accessible educational materials for patients.
No to our knowledge, there are no materials pertaining specifically to environmental health exposures	

No, to our knowledge, there are no materials pertaining specifically to environmental health exposures, nor lectures or courses.

It is important to note that the hospitals affiliated with ICSM, are separate institutions which have distinct management boards with their own sustainability directors.

5. Do hospitals affiliated with your medical school have accessible educational materials for patients about climate change and health impacts?

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

It is important to note that the hospitals affiliated with ICSM, are separate institutions which have distinct management boards with their own sustainability directors.

Section Total (5 out of 12)

•

5

Support for Student-Led Planetary Health Initiatives

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

1. Does your institution offer support for medical students interested in enacting a sustainability initiative?

2 Yes, the institution offers grants available to medical students for students to enact sustainability initiatives.

The medical school encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available.

0 No, the institution does not offer opportunities or support for sustainability initiatives.

Although the institution does not have a specific scheme pertaining to planetary health/sustainable healthcare, Imperial has put in place something called the <u>Entreprise Lab</u> that allows students in any discipline to find different funds to pitch their ideas to and receive funding. One of them is the <u>Discovery Fund</u>, which is a £500 bursary to help a person or a team develop their comercial idea.

The <u>Venture Catalyst Challenge</u> is Imperial's flagship entrepreneurial competition for Imperial students and alumni to develop an innovative idea for commercialisation and win cash prizes. There are 5 tracks (Energy & Environment, AI & Robotics, Health & Wellbeing, Creative & Consumer, Digital & FinTech). Each track winner is awarded £10,000 together with the possibility to compete at the grand final and be awarded the Grand Final Price of £20,000. Furthermore there is a £10,000 prize for Social Impact. The only prerequisite is to have carried out customer and market research to demonstrate a real problem and an innovative potential solution.

The <u>StudentShaper</u> is a programme that supports partnership between staff and students on a broad range of projects in educational development and educational research open to the entire Imperial College staff and student body. The programme will provide financial support to students to facilitate them taking part in partnership activities.

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

3* The institution offers an explicit paid fellowship for medical students to do research related to planetary health and/or sustainable healthcare.

2*	The institution offers paid research opportunities for students and planetary health/sustainable healthcare projects would be considered eligible.

1 There are unfunded research opportunities for students to perform research related to planetary health/sustainable healthcare.

0 There are no opportunities for students to receive funding for planetary health/sustainable healthcare research.

At Imperial we have an Undergraduate Research Opportunities Programme (UROP) that allows students to get involved in research for a period of time (normally during summer). Nevertheless they need to be organized by students and are not organized by the medical school itself.

The Transition to Zero Pollution initiative has funding for Imperial College London undergraduate students to undertake UROP placements for summer 2021. Up to 10 scholarships are available for projects of 6-10 weeks in length and will provide a bursary of £350 per week. Projects will need to be aligned to the Transition to Zero Pollution initiative.

(https://www.imperial.ac.uk/zero-pollution/students/opportunities-for-undergraduates/)

The Science and Solutions for a Changing Planet Doctoral Training Partnership (SSCP DTP) is a unique and prestigious doctoral training opportunity, funded by NERC and based at the <u>Grantham</u> <u>Institute</u>. This innovative programme integrates <u>six Host Partners</u> and a number of other private and public sector partners to train and inspire a new generation of environmental experts and leaders to tackle some of the toughest challenges of our time.

(https://www.imperial.ac.uk/grantham/education/science-and-solutions-for-a-changing-planet-dtp/)

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

The medical school 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.

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.

While the Medical School in particular does not have a webpage with specific information related to planetary health and/or sustainable healthcare activities, Imperial College has a web page titled <u>Sustainability</u> that contains all the information regarding all the sustainable actions, projects, events and educational opportunities there are at Imperial College. Nevertheless the webpage does not have a dedicated Planetary Health or Sustainable Healthcare informational page.

4. Does your medical school have funded, 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 funded student organization with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support and/or funding.
0	No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare.
Stud	ents for Global Health at Imperial College is a student organisation that has a dedicated planetary

Students for Global Health at Imperial College is a student organisation that has a dedicated planetary health subcommittee that has funding support from the Imperial College Union. Their focus is campaigning, advocacy, volunteering and addressing the UN's Sustainable Development Goals.

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

1 Yes, there is a student representative that serves on a medical school or institutional decision-making council.

0 No, there is no such student representative.

There is no such student representative at the medical school. Nevertheless at the institutional level we have the Ethics and Environmental officer who seeks to ensure that green issues are tackled on campus.

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.

	Local volunteer opportunities related to building community resilience to anthropogenic
	environmental impacts.

Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students) that follow Leave No Trace principles.

For students that choose to intercalate in Global Health (intercalation is mandatory for ICSM students) they have a Community Group Placement (CGP) scheme in order to develop social accountability and community engagement skills. All CGP partner organisations are community-based organisations (CBO) working with our local communities across London. One of them being the <u>Hammersmith</u> <u>Community Gardens Association (HCGA)</u> is a local environmental charity that manages several community gardens in Hammersmith and Fulham with a range of projects including conservation training schemes, volunteer gardening sessions, and health and wellbeing projects.

We are not aware of any other initiative relating to this metric.

Section Total (7 out of 14)

1

7

Campus Sustainability

<u>Section Overview:</u> 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 endeavor, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinizing 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 minimizing environmental impact.

1. Does your medical school and/or institution have an Office of Sustainability?				
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.			
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.			
1	There are no salaried sustainability staff, but there is a sustainability task force or committee			
0	There are no staff members or task force responsible for overseeing campus sustainability			
advi, prog Coll to m (Cha Envi Dep Oper Mau Read Man Cam Man Furt Coll mon	0There are no staff members or task force responsible for overseeing campus sustainabilityImperial has created in 2020 a Sustainability Strategy Advisory Group with its main focuses being "to advise on and discuss key matters relating to environmental sustainability at the College, in light of progress that has already been made in this area, best practice across the wider sector, and College-level challenges"and "to determine the principal areas where the College can focus its efforts to make all aspects of its activities as sustainable as possible." It is composed by Professor Paul Lickiss (Chair), Academic Leader in Sustainability, Mr Andy Hammond, Head of Engineering, Energy and Environment (Estates Operations), Mr Kamil Khoury, Head of Catering Operations, Ms Fifi Henry, Deputy President (Finance and Services), Imperial College Union, Ms Allison Hunter, Technical Operations Manager (Life Sciences), Dr Neil Jennings, Greening Imperial Representative, Professor Maurizio Zollo, Professor of Strategy and Sustainability (Business School), Dr Wouter Buytaert, Reader in Hydrology and Water Resources (Faculty of Engineering), Dr Emma Sharp, Project Manager (Faculty of Natural Sciences), Professor Sian Harding, Head of the Faculty of Medicine Campus Development and Management Group (Faculty of Medicine), Ms Bridget McNulty, Management Trainee (Secretary).Furthermore, Imperial College has a Health, Safety and Environment Committee chaired by the College Secretary and reports to the Management Board and onto the Colleges' Council. It formally monitors the work done regarding sustainability initiatives, tracks their progress and reports achievements. It is composed by one member from each of the Faculties, The Director of Estates			

Professor Paul Lickiss has been appointed as the Academic Leader in Sustainability.

Nevertheless, Imperial still seems to be lacking a Office of Sustainability with one or more full-time staff dedicated only to campus sustainability.

2. Does your medical school and/or institution have a stated goal of carbon neutrality by 2050?		
4*	The medical school is already carbon neutral.	
3	3 Yes, there is a stated carbon neutrality goal and the medical school has a well-defined and adequate plan in place to achieve this goal.	
2	Yes, there is a stated carbon neutrality goal, but the medical school has not created a plan to reach that goal or the plan is inadequate.	
1	There is a CO2 emission reduction goal, but it is not one of carbon neutrality.	
0	There is no stated goal for reduction of CO2 emissions.	
In the Sustainability Strategy 2021-2026 Imperial has restated its commitment to be a sustainable and net zero carbon institution by 2040 and to achieve the ISO14001 Environmental Management standard.		

Carbon saving is planned to be embedded in every aspect of Imperial, from operation of buildings, processing of waste, buying products, to travel and teaching. In real terms the College has reduced by 32% in combined scope 1 and 2 emissions per FTE over the period 2014–15 to 2018–19.

For more information on how Imperial is achieving this change, look at the report <u>Imperial</u> <u>Sustainability Strategy 2021-26</u>.

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	0 Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.	
Since October 2019, Imperial College procures 100% of its bought-in electricity through a Renewable Energy Guarantees Origin (REGO) backed tariff.		

For more information on where Imperial gets its energy, click here.

4. Are sustainable building practices utilized for new and old buildings on the medical school campus, with design and construction of new buildings and remodeling of old buildings conforming to a published rating system or sustainable building code/guideline?				
3	Yes, sustainable building practices are utilized 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 utilized 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.			
In th	e <u>Imperial Sustainability Strategy 2021-26</u> the College has committed to:			
 Plan for the next academic building, The School of Public Health, on the White City Campus to be BREEAM excellent; Design buildings and infrastructure with low-cost, low-frequency maintenance and easy access to space, plant and equipment; Optimise passive design features, such as increasing daylight and natural ventilation and reducing heating and mechanical cooling, and increase the wellbeing of students, staff and visitors through improved building design; Maximise low and zero carbon technologies such as solar photovoltaic and ground source heat pumps; Carry out life cycle cost analysis of construction and refurbishment on all projects to ensure that sustainability considerations are taken into account; Benchmark all construction and refurbishment projects against ambitious external environmental performance certifications, for example the Building Research Establishment Environmental Assessment Method (BREEAM) and the Royal Institution of Chartered Surveyors SKA Rating for Higher Education. 				
Furthermore the Molecular Sciences Research Hub (MSRH), the new research home for the Department of Chemistry, was awarded BREEAM Excellent Certification for its overall environmental and operational performance. In 2019, the MSRH was also awarded the S-Lab (Safe, Successful, Sustainable Laboratories) Award in the Refurbished Buildings and Spaces category.				
Impe	erial's long term goal is also to achieve the ISO14001 Environmental Management standard.			
5. Has the medical school implemented strategies to encourage and provide				

environmentally-friendly transportation options for students and reduce the environmental impact of commuting?

Yes, the medical school has implemented strategies to encourage and provide

2 environmentally-friendly transportation options such as safe active transport, public transport, or carpooling and these options are well-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.

- 1 The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
- 0 The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.

Imperial College is located in London's city centre where unsustainable forms of transportation like cars are not generally used by students. Medical students walk or cycle to university or use public forms of transport, like the underground or London's public electric bus service are mostly used.

The use of public forms of transport is heavily advertised throughout the College and reminders to apply for a student Oyster Card are often sent out to incoming cohort of students.

Imperial has an <u>Active Travel</u> website which provides information and support on how to incorporate cycling, running or walking into commuting. There is also a Cyclist Imperial Yammer Group available for people to join. On campus there are a range of facilities, tools and support available to keep staff and student's bicycles safe on campus.

Furthermore Imperial is part of the <u>Cycle to Work scheme</u>, which allows staff to apply for a loan that can be used to hire a bicycle from approved retailers, providing average savings between 25-39% compared to retail prices.

Finally Imperial also has an <u>Imperial Shuttle Bus</u> service providing free transport between the South Kensington, White City and Hammersmith campuses for staff and students.

6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminum/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.		
	Imperial has a <u>Waste Directory</u> which is an easy and accessible resource for staff and students to see what can be recycled on campus and how.		

Throughout the campus there are recycling bins for glass, dry mix recycling, general waste and paper & card. There are 2 different compost programs for students and for on campus catering outlets. The Compod, an onsite composter, processes 1.1 tonnes of food waste produced each week in catering outlets on the South Kensington Campus. Food waste created by students on Imperial's accommodation

is collected through a Food Waste bin available to all students and taken to a processing centre where any contaminants are removed and the waste is converted into compost.

Imperial's accommodations also have an <u>End-of-term reuse scheme</u>. This scheme has run since 2009 to divert waste from landfill at the end of term. There are 3 separate schemes:

- Good food can be donated to the box in the kitchens, which will be donated to <u>The Felix</u> <u>Project</u>.
- A scheme is run by <u>British Heart Foundation</u> (BHF) which accepts unwanted clothing, textiles, paired shoes, bags, books, CDs, DVDs, small electrical items, homewares and clean, good quality crockery that is collected by the Imperial's accommodations and directly delivered to the BHF.
- Duvets and pillows can be donated this year in a separate scheme run by <u>Better Reuse</u>.

The College has joined <u>Warp It</u> (Waste Action Reuse Portal), a redistribution network, which works in a similar way to Ebay or Freecycle but for organisations rather than individuals. Warp It makes it easy for departments to give away, loan or claim items unwanted by others within the organisation and beyond. The scheme encourages reuse, saves money and carbon. Items which can currently be reused include furniture, stationery and unused printer cartridges.

7. Does the medical school apply sustainability criteria when making decisions about the campus food and beverage selections?		
3	Yes, the medical school has adequate sustainability requirements for food and beverages 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.	
Imperial has recently launched Plantworks which is Imperial College's first entirely plant-based and		

vegan catering outlet. Plantworks features a bespoke and fresh menu of plant-based foods and drinks.

Since 2018, all College outlets exclusively provide wooden knives, forks and spoons when taking a meal away. This wooden cutlery is reusable, recyclable and compostable, meaning it has a smaller environmental impact than a plastic alternative.

The College's primary food supplier, Brakes, is a member of the Roundtable on Sustainable Palm Oil (RSPO) and, in 2019, achieved RSPO Supply Chain Certification for the purchase, storage and distribution of products.

During the month of January 2019 every Monday venues across campus switched their meat (excluding fish) dishes for vegetarian alternatives. However, this campaign only ran for a month.

In the <u>Imperial Sustainability Strategy 2021-26</u> the College has committed:

- "To work with our suppliers to ensure that food and drink are sourced responsibly, food miles are minimised and the effects on the wider environment are taken into account, and to increase consumer awareness of the environmental impact of food and drink."

8. Does the medical school or associated institution apply sustainability criteria when making decisions about supply procurement?		
3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.	
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is engaged in efforts to increase sustainability of procurement.	
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is not engaged in efforts to increase sustainability of procurement.	
0	There are no sustainability guidelines for supply procurement.	

The College's primary food supplier, Brakes, is a member of the Roundtable on Sustainable Palm Oil (RSPO) and, in 2019, achieved RSPO Supply Chain Certification for the purchase, storage and distribution of products.

In the <u>Imperial Sustainability Strategy 2021-26</u> the College has committed:

- To use our influence with our suppliers and partners to procure environmentally-friendly supplies and services, to reduce consumption and, where possible, purchase goods and services which may be manufactured, used and disposed of in an environmentally-responsible way. We will:
 - Develop appropriate metrics to measure progress in influencing our suppliers and partners to procure environmentally-friendly supplies and services;
 - Assess all potential suppliers on their environmental policies such as BS7750, EMAS and ISO 14001, and continually monitor our major suppliers on their environmental policies and practices.

Furthermore the College requires its suppliers and contractors to identify and monitor the environmental impacts of their companies' activities and are required to have in place active management of their environmental effect ensuring compliance with local environmental legislation and having an environmental policy or statement.

Furthermore Imperial College stated that: "The College will only work with suppliers where the minimum age of an employee is appropriate, there is no forced or bonded labour, there is no discrimination in hiring, training, promotion, termination or retirement based on race, caste, national origin, religion, age, disability, gender, marital status, sexual orientation, union membership or political affiliation".

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

2 Every event hosted at the medical school must abide by sustainability criteria.

1 The medical school strongly recommends or incentivizes sustainability measures, but they are not required.

0 There are no sustainability guidelines for medical school events.

The Internal Events & Catering team at Imperial College have altered how internal catering orders are delivered in order to reduce waste and single-use items. Plastic trays have been replaced with wooden alternatives whilst disposable stirrers and sugar sachets have been replaced with reusable spoons and sugar cubes respectively. Plastic cling film usage has also been reduced by approximately 90%.

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

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

Imperial College took part in the <u>Laboratory Efficiency Assessment Framework</u> which aims to reduce carbon footprints and improve sustainability of individual labs, whilst reducing costs. Teams made use of the sustainability guidance in the LEAF Workbook to address energy efficiency, waste management, sharing resources and ensuring that good induction and leaving procedures were in place. 21 labs, including some in the faculty of medicine, took part with six silver and 15 bronze LEAF certifications being awarded.

This translated to an estimated £70,000 *in savings and* 120 *tonnes of CO2e avoided. Imperial College is actively encouraging labs to apply for the* 2021 *cycle.*

In 2019, 21 among research groups and facilities from seven departments, achieving six silver and 15 bronze LEAF certificates, across Imperial took part in the national LEAF scheme in 2020. Teams made use of the sustainability guidance in the LEAF Workbook to address energy efficiency, waste management, sharing resources and ensuring that good induction and leaving procedures were in place. Improved management of fume cupboards, freezers and waste led to the highest savings and reduced the environmental impact of research. The results were encouraging The LEAF scheme will run again in 2021 in an expanded form across more laboratories.

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

- 4 The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
- 3 No, the institution is entirely divested from fossil fuels.

2	The institution has partially divested from fossil-fuel companies.	
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.	
0	0 Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.	
Imperial College has declared that "The College will continue to invest in fossil fuels companies that demonstrate they are actively moving towards meeting Paris Agreement targets. [] The College helieves that on the current evidence, thermal coal and tar sand extraction do not play a		

that demonstrate they are actively moving towards meeting Paris Agreement targets. [...] The College believes that, on the current evidence, thermal coal and tar sand extraction do not play a part in achieving the Paris Agreement targets and will therefore instruct the Endowment Board to divest from direct and indirect investments in companies engaged in these activities that are unable to make progress towards Paris Agreement targets."

Nevertheless the Imperial College Community feels that this action is not enough and has asked for further clarifications and actions.

(https://www.imperial.ac.uk/media/imperial-college/about/leadership-and-strategy/president/publi c/Socially-Responsible-Investment-Policy---Investing-in-Fossil-Fuels.pdf)

Section Total (24 out of 29)

Grading

Section Overview

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

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

Planetary Health Grades for the Imperial College School of Medicine

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

Section	Raw Score	Grade
Planetary Health Curriculum (30%)	30 / 58 = 51.7%	С
Interdisciplinary Research (17.5%)	9 / 19 = 47.4%	С
Community Outreach and Advocacy (17.5%)	5 / 12 = 41.7%	C-
Support for Student-led Planetary Health Initiatives (17.5%)	7 / 14 = 50.0%	С
Campus Sustainability (17.5%)	24 / 29 = 82.8%	A-
Institutional Grade	54.3%	C+