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# Planetary Health Report Card (Physiotherapy): Karolinska Institutet

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**Karolinska  
Institutet**

## **2024-2025 Contributing Team:**

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1: Medical programme; 2: Physiotherapy programme; 3: PhD programme; 4: KI Alumni, 5: Health informatics programme; 6: Biomedicine BSc programme

**Faculty Mentors:** Assoc. Prof. Marie Dahlin, MD (director of the Medical programme); Prof. Karin Dahlman-Wright PhD<sup>1</sup> (chair of the Council for Environment and Sustainable Development); Prof. Susanne Gabrielsson PhD; Prof. Christian Giske, MD PhD; Assoc. Prof. Hanna Karlsson, PhD; Caisa Laurell, MD; Assoc. Prof. Karin Leander, PhD; Emma Swärdh, PhD; Prof. Peter Stenvinkel, MD PhD; Sara Widén, Leg Psykolog

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<sup>1</sup> Reviewed only the section on Campus Sustainability

## Summary of Findings

<b>Overall Grade</b>	<b>B-</b>
<b>Curriculum</b>	<b>C-</b>
<p>The undergraduate physiotherapy program at Karolinska Institutet includes planetary health in the core curriculum, which is integrated longitudinally in the physiotherapy program. However, the teaching and learning activities should be further developed to focus more on physiotherapy context and practice than on the general health care system.</p> <p><b>Recommendations:</b> The responsibility to cover planetary health and its connection to patients' health should be assigned to a larger number of teachers and courses as well as delve deeper into physiotherapy rehabilitation.</p>	
<b>Interdisciplinary Research</b>	<b>A</b>
<p>KI's planetary health websites have improved. Several departments (e.g., IMM and CESH) conduct planetary health related research, but there is no dedicated section within the medical departments. KI has hosted conferences and collaborated with global health organizations, but vulnerable groups (e.g. Indian and Ugandan communities) are poorly represented and uninvolved in shaping the research agenda.</p> <p><b>Recommendations:</b> KI should boost community engagement in planetary health research, especially for those most affected by climate change, through co-design research. Establishing student funding for planetary health research and conducting SH research at KI would be clear improvements</p>	
<b>Community Outreach and Advocacy</b>	<b>D+</b>
<p>In the past three years, KI has lacked collaborations with community organizations and has not provided public and health care providers with courses or educational material on planetary health.</p> <p><b>Recommendations:</b> KI should regularly organize events on the health impacts of climate change for both the general public and healthcare staff. Sustainability must also systematically be covered in internal communication. Finally, KI-associated hospitals should distribute education materials to all patients covering these topics and advocate for other hospitals to do the same.</p>	
<b>Support for Student-Led Initiatives</b>	<b>A-</b>
<p>KI acknowledges sustainability initiatives through its Sustainability Award and has student representatives on its Council for Environment and Sustainable Development. Support is provided to SSD, a KI affiliated student-led sustainability organisation.</p> <p><b>Recommendations:</b> KI should continue to provide resources and support to student organisations like SSD. KI should also engage in organising and supporting events that provide students with more possibilities to get involved in and learn about planetary health. KI should provide opportunities to medical students that want to pursue activities in planetary health outside of the core curriculum.</p>	
<b>Campus Sustainability</b>	<b>B</b>
<p>KI has signed up to agreements with other universities to conduct its activities in line with the Paris Agreement. However, emissions from travelling and procurement remain high. In addition to already existing small sustainability initiatives, a system for food waste was implemented last year.</p> <p><b>Recommendations:</b> KI should mandate that campus restaurants serve more sustainable food, render lab spaces more sustainable, and include sustainability considerations in their procurement procedures. Moreover, we urge KI to take a strong stance on climate action by publicly committing to fossil fuel divestment.</p>	

# Statement of Purpose

Planetary health is human health.

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

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

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

# Definitions & Other Considerations

## Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilisation and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of health professional education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
  1. Describe how the environment and human health interact at different levels.
  2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
  3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Physiotherapy School/Department vs. Institution:** When “physiotherapy school” is specified in the report card, this only refers to curriculum offered within the physiotherapy program, and resources offered at/for the Division of Physiotherapy or the Department of Neurobiology, Care Sciences and Society, and does not include offerings from other parts of the university (for example, other programs or related departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly. Any resource reasonably accessible by physiotherapy students, no matter where in the

institution the resource comes from or if it is specifically targeted for physiotherapy students, can meet this metric

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

disproportionately impacted by the climate crisis.

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

**Other considerations:**

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

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

# Planetary Health Curriculum

**Section Overview:** This section evaluates the integration of relevant planetary health topics into the physiotherapy school curriculum. Today's physiotherapy students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that physiotherapy 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 physiotherapy school's core curriculum.

## Curriculum: General

<b>1.1. Does the physiotherapy curriculum offer elective (student-selected) courses or modules specifically focused on sustainable healthcare practices or environmental physiotherapy?</b>	
No, the physiotherapy school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	0
Score explanation: There are no options for module electives at all throughout the program.	

<b>1.2. Does the curriculum address the health risks of extreme heat from climate change on patient care, particularly for vulnerable populations that physiotherapists commonly treat (e.g. children, elderly, athletes)?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
Score explanation: As part of the course Professional Development - Physiotherapy as a Subject and a Profession (1FY016, 3 credits), given in the first semester, the topic is covered in a full-day interactive lecture called "Health" including discussions, reflections and a small group work with oral presentation. There is a dedicated learning outcome stating students should "discuss factors that influence the relationship between movement, functioning and health, including human rights, planetary health and sustainable development". The lecture includes parts where the topic is either partially such as health consequences of extreme heat nationally and globally (<5 slides).	

A part of the course Theme Healthcare - Inpatient Physiotherapy (1FY027, 15 credits), given the third semester, the topic is covered partly in a hour long digital learning activity containing two short movies about extreme heat and air pollution as well as written reflections in relation to physiotherapy practice. After the clinical placement the topic is partly covered in a half day long seminar/workshop where the students discuss and reflect on different questions related to the topic within physiotherapy. There is a dedicated learning outcome stating students should “discuss and reflect on health impacts of climate change and principles of sustainable healthcare in inpatient settings”.

As part of the course Healthcare - Physiotherapy in Primary Care (1FY044, 19,5 credits), given in the fifth semester, the topic is covered in a half-day interactive lecture called “Sustainable health care and unhealthy lifestyle habits”, including discussions and reflections. There is a dedicated learning outcome stating students should “analyse and critically reflect on the possibilities of health care to work with sustainable development within their own profession and the given workplace”. The lecture includes parts where the topic is either partially or fully in focus, such as health consequences of extreme heat nationally and globally (<5 slides and 1 short movie).

### Curriculum: Health Effects of Climate Change

#### 1.3. Is there content on how extreme weather events affect physiotherapy practice and service delivery, for example, disaster response and rehabilitation following these events?

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

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

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

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

Score Assigned:

0

Score explanation:

The topic is only briefly mentioned as a side-topic in a half-day seminar/workshop within the course Theme Healthcare - Inpatient Physiotherapy (1FY027, 15 credits). The topic is mentioned in several courses, but as a generic topic within healthcare and not specifically within physiotherapy. This does not qualify for points.

#### 1.4. Does the curriculum cover how changing patterns of infectious diseases due to climate change might impact physiotherapy practice and patient management?

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

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



This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	0
<p>Score explanation:</p> <p>There is no content in the courses looking at how changing patterns of infectious diseases due to climate change might impact physiotherapy practice and patient management. However the topic infectious diseases and climate change in a generic perspective is briefly covered in some courses. This does not qualify for points.</p>	

1.5. Does the program address the relationship between climate change, air pollution, respiratory health, and physiotherapy interventions?	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	2
<p>Score explanation:</p> <p>As part of the course Professional Development - Physiotherapy as a Subject and a Profession (1FY016, 3 credits), given in the first semester, the topic is covered in a full-day interactive lecture called “Health” including discussions, reflections and a small group work with oral presentation. There is a dedicated learning outcome stating students should “discuss factors that influence the relationship between movement, functioning and health, including human rights, planetary health and sustainable development”. The lecture includes parts where the topic is either partially such as health consequences of air pollution and illness nationally and globally (&lt;5 slides).</p> <p>A part of the course Theme Healthcare - Inpatient Physiotherapy (1FY027, 15 credits), given the third semester, the topic is covered partly in a hour long digital learning activity containing two short movies about extreme heat and air pollution as well as written reflections in relation to physiotherapy practice. After the clinical placement the topic is partly covered in a half day long seminar/workshop where the students discuss and reflect on different questions related to the topic within physiotherapy. There is a dedicated learning outcome stating students should “discuss and reflect on health impacts of climate change and principles of sustainable healthcare in inpatient settings”.</p> <p>As part of the course Healthcare - Physiotherapy in Primary Care (1FY044, 19,5 credits), given in the fifth semester, the topic is covered in a half-day interactive lecture called “Sustainable health care and unhealthy lifestyle habits”, including discussions and reflections. There is a dedicated learning outcome stating students should “analyse and critically reflect on the possibilities of health care to work with sustainable development within their own profession and the given workplace”. The lecture includes parts where the topic is either partially or fully in focus, such as health consequences of air pollution and illness nationally and globally (&lt;5 slides and 1 short movie).</p>	

Recommendations: There are several courses where this topic could be addressed, and together they could give a deepened understanding from physiology to patient care.  
 1FY030, "Healthcare - Clinical Medicine 1", in the lecture about pulmonary disease.  
 1FY026 "Intervention - Physiotherapy 3", when discussing physiotherapy interventions for patients with respiratory complications.  
 1FY050, "Examination - Physiology 2", when learning about pulmonary physiology

### 1.6. Is there content on how climate change and increased heat affect cardiovascular health, and how this impacts physiotherapy assessment and treatment planning?

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

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

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

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

Score Assigned:

2

Score explanation:

A part of the course Theme Healthcare - Inpatient Physiotherapy (1FY027, 15 credits), given the third semester, the topic is covered partly in a hour long digital learning activity containing two short movies about extreme heat and air pollution as well as written reflections in relation to physiotherapy practice. There is a dedicated learning outcome stating students should "discuss and reflect on health impacts of climate change and principles of sustainable healthcare in inpatient settings".

As part of the course Healthcare - Physiotherapy in Primary Care (1FY044, 19,5 credits), given in the fifth semester, the topic is covered in a half-day interactive lecture called "Sustainable health care and unhealthy lifestyle habits", including discussions and reflections. There is a dedicated learning outcome stating students should "analyse and critically reflect on the possibilities of health care to work with sustainable development within their own profession and the given workplace". The lecture includes parts where the topic is either partially or fully in focus, such as health consequences of extreme heat and cardiovascular health (<5 slides and 1 short movie).

Recommendations: There are several courses where this topic could be addressed, and together they could give a deepened understanding from physiology to patient care.

1FY030, "Healthcare - Clinical Medicine 1", in the lectures about stroke and cardiovascular diseases.

1FY026, "Intervention - Physiotherapy 3", when discussing physiotherapy interventions for patients with cardiovascular complications (high blood pressure, risks of training in high temperatures).

1FY050, "Examination - Physiology 2", when learning about circulatory physiology.

### 1.7. Does the curriculum address climate change's potential mental health impacts on patients and how this might affect physiotherapy outcomes?

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

This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	0
Score explanation: The curriculum does not address climate change's potential mental health impacts on patients and how this might affect specifically physiotherapy outcomes. However the topic mental health impacts in a generic perspective is briefly covered in some courses. This does not qualify for points.	

<b>1.8. Does the program integrate discussions on the importance of food and water security and environmental factors in patient care and recovery addressing how these could be impacted by climate change?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	0
Score explanation: The topic is only briefly mentioned as a side-topic (for example planetary health, ecosystems and food/water supplies) within a couple of slides, in lectures part of the courses Professional Development - Physiotherapy as a Subject and a Profession (1FY016, 3 credits), Intervention - Physiotherapy 3 (1FY026, 7,5 credits), and the Healthcare - Physiotherapy in Primary Care (1FY044, 19,5 credits). This does not qualify for points.	

<b>1.9. Does your physiotherapy school curriculum address how patterns of colonialism, extractivism, economic exploitation and marginalization are responsible for producing climate change resulting in an outsized impact on marginalized populations (e.g. low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults)?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	2

Score explanation:

As part of the course Healthcare - Health Promotion and Global Health, (1FY045, 7,5 credits), given in the fifth semester, the topic is covered in a two-hour lecture and group discussion on “Global health and the SDGs”. There is a dedicated learning outcome stating students should “reflect on the concept of sustainable development and identify possibilities and challenges in achieving the global goals for sustainable development within the profession of physiotherapy”. These parts of the course include social determinants of health, climate footprint between different countries and regions - global north and global south, sustainable development report.

**1.10. Does your physiotherapy school curriculum address how global climate change impacts might affect physiotherapy practice in different regions, including potential changes in patient demographics due to climate migration?**

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

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

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

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

Score Assigned:

0

Score explanation:

There is no content in the courses looking at how global climate change impacts might affect physiotherapy practice in different regions, including potential changes in patient demographics due to climate migration.

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

**1.11. Does the curriculum address the potential impacts of environmental toxins on patient health and rehabilitation, particularly in pediatric or neurological physiotherapy?**

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

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

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

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

Score Assigned:

0

Score explanation:

There is no content in the courses address the potential impacts of environmental toxins on patient health and rehabilitation.

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**1.12. Does your physiotherapy school curriculum incorporate local environmental health issues into case studies, lectures or practical sessions?**

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

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

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

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

Score Assigned:

0

Score explanation: To our knowledge, local environmental health issues are currently not incorporated in the physiotherapy school curriculum.

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

Indigenous knowledge and value systems are integrated throughout the physiotherapy school's planetary health education (3 points)

Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum. (2 points)

Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework. (1 point)

This topic was not covered. (0 points)

Score Assigned:

2

Score explanation:

As part of the course Professional Development - Physiotherapy as a Subject and a Profession (1FY016, 3 credits), given in the first semester, the topic is covered in a full-day interactive lecture called "Health" including discussions, reflections and a small group work with oral presentation. There is a dedicated learning outcome stating students should "discuss factors that influence the relationship between movement, functioning and health, including human rights, planetary health and sustainable development". The lecture includes parts where the topic is either partially in focus such as nature connectedness, place-attachment, and pro-environmental behaviour, as well as Indigenous people globally, climate change and health (<5 slides).

**1.14. Does your physiotherapy school curriculum address how environmental factors disproportionately affect marginalized populations such as those with low SES, women, communities of color, children, homeless populations, Indigenous populations, and older adults, and how physiotherapists can address this in their practice?**

This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	0
<p>Score explanation:</p> <p>To our knowledge, 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 is currently not covered in the physiotherapy school curriculum.</p>	

### Curriculum: Sustainability

<b>1.15. Does the curriculum promote the co-benefits of sustainable lifestyle choices (e.g. active transport, green exercise and Healthy Plant-Based Diets) as part of patient education and treatment plans?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
<p>Score explanation:</p> <p>As part of the course Professional Development - Physiotherapy as a Subject and a Profession (1FY016, 3 credits), given in the first semester, the topic is covered in a full-day interactive lecture called “Health” including discussions, reflections and a small group work with oral presentation. There is a dedicated learning outcome stating students should “discuss factors that influence the relationship between movement, functioning and health, including human rights, planetary health and sustainable development”. The lecture includes parts where the topic is either partially or fully in focus such as nature connectedness – definitions and health effects (&lt;5 slides).</p> <p>As part of the course Intervention - Physiotherapy 2 (1FY023, 15 credits), given in the second semester, the topic is covered in a one-hour lecture including discussions and reflections called “Sustainable physical activity”. There is a dedicated learning outcome stating students should “analyse and discuss the promotion of physical activity based on the global sustainable development goals and relate this to the role of the physiotherapist in health care”. The lecture has the topic fully in focus and includes physical activity in relation to the global sustainable development goals, planetary-health enhancing physical activity with an analysis of environmental</p>	

and health impact, active transportation with an analysis of environmental impact, as well as definitions, challenges and possibilities (>15 slides)

As part of the course Intervention - Physiotherapy 3 (1FY026, 7,5 credits), given in the third semester, the topic is covered in a half-day lecture called “Unhealthy lifestyle habits and e-health” including discussions and reflections. There is a dedicated learning outcome stating students should “be familiar with key elements of national guidelines for the prevention and treatment of unhealthy lifestyles and justify and give examples of how they can be used in relation to the role of the physiotherapist and future arenas to achieve the global goals for sustainable development”. The lecture includes parts where the topic is either partially or fully in focus such as Agenda 2030 and the global sustainable development goals, planetary-health diet and the new Nordic nutrition recommendations where the climate aspect has been taken into account, advising reduced meat consumption (<5 slides).

As part of the course Healthcare - Physiotherapy in Primary Care (1FY044, 19,5 credits), given in the fifth semester, the topic is covered in a half-day interactive lecture called “Sustainable health care and unhealthy lifestyle habits” including discussions and reflections. There is a dedicated learning outcome stating students should “be able to discuss the application of behavioural medicine principles to support individuals to a healthy lifestyle as well as analyse and critically reflect on the possibilities of health care to work with sustainable development within their own profession and the given workplace”. The lecture includes parts where the topic is either partially or fully in focus such as Agenda 2030 and the global sustainable development goals, planetary-health diet and the new Nordic nutrition recommendations where the climate aspect has been taken into account, advising reduced meat consumption (<5 slides).

**1.16. Does your physiotherapy school curriculum cover the carbon footprint of physiotherapy practice and strategies to reduce it?**

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

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

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

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

Score Assigned:

3

**Score explanation:**

As part of the course Professional Development - Physiotherapy as a Subject and a Profession (1FY016, 3 credits), given in the first semester, the topic is covered in a full-day interactive lecture called “Health” including discussions, reflections and a small group work with oral presentation. There is a dedicated learning outcome stating students should “discuss factors that influence the relationship between movement, functioning and health, including human rights, planetary health and sustainable development”. The lecture includes parts where the topic is either partially or fully in focus such as the healthcare sectors climate footprint, ethical issues on climate mitigation and adaptation from the healthcare, world physiotherapy climate and health policy, principles of sustainable clinical and healthcare practice (<5 slides).



A part of the course Theme Healthcare - Inpatient Physiotherapy (1FY027, 15 credits), given the third semester, the topic is covered partly in a hour long digital learning activity containing a short presentations on sustainable healthcare. After the clinical placement the topic is partly covered in a half day long seminar/workshop where the students discuss and reflect on different questions related to the topic within physiotherapy. There is a dedicated learning outcome stating students should “discuss and reflect on health impacts of climate change and principles of sustainable healthcare in inpatient settings”.

As part of the course Scientific Work - Research Methods (1FY031, 7,5 credits), given in the fourth semester, the topic is covered by reading and reflecting on an article focusing on the triple-bottom line called “A Call to Include a Perspective of Sustainable Development in Physical Therapy Research” as well incorporate social, environmental and economic sustainability in a written discussion on a physiotherapy intervention. There is a dedicated learning outcome stating students should “be able to discuss how sustainable development can be included in physiotherapy research based on one’s own values and literature”.

As part of the course Healthcare - Physiotherapy in Primary Care (1FY044, 19,5 credits), given in the fifth semester, the topic is covered in a half-day interactive lecture called “Sustainable health care and unhealthy lifestyle habits” including discussions and reflections. There is a dedicated learning outcome stating students should “analyse and critically reflect on the possibilities of health care to work with sustainable development within their own profession and the given workplace”. The lecture includes parts where the topic is either partially or fully in focus such as Agenda 2030 and the global goals, the healthcare sectors climate footprint, ethical issues on climate mitigation and adaptation from the healthcare, world physiotherapy climate and health policy, principles of sustainable clinical and healthcare practice with examples from NHS, triple-bottom line (<10 slides and 1 short movie).

As part of the course Healthcare - Health Promotion and Global Health, (1FY045, 7,5 credits), given in the fifth semester, the topic is briefly covered in a two-hour lecture and group discussion on “Health promotion”. There is a dedicated learning outcome stating students should “reflect on the concept of sustainable development and identify possibilities and challenges in achieving the global goals for sustainable development within the profession of physiotherapy”. The lecture includes parts where the topic is either partially or fully in focus such as health prevention and the healthcare sector's climate footprint

1.17. Does your physiotherapy school curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum (e.g., musculoskeletal, neurological, cardiorespiratory)? (1 point each)	Score
Waste production within the healthcare system and strategies for reducing waste in clinical activities, such as in the operating room. (1 point)	1
The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	0
The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	0
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 fulfill this metric. (1 point)	0



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 for obesity. This is commonly known as social prescribing. (1 point)	1
The health and environmental co-benefits of avoiding excessive physiotherapy treatment and over-investigation. (1 point)	1
<p>Score explanation:</p> <p>1. During the lecture and seminar part of the course Healthcare - Physiotherapy in Primary Care (1FY044, 19,5 credits), students engage in discussions on the health care sector climate footprint and principles of sustainable healthcare practice with examples from the orthopaedic specialty.</p> <p>5. During the lectures part of the courses Intervention - Physiotherapy 2 (1FY023, 15 credits), Theme Intervention – Physiotherapy (1FY026, 7,5 credits), Theme Scientific Work - Research Methods (1FY031, 7,5 credits), Theme Healthcare - Physiotherapy in Primary Care (1FY044, 19,5 credits) and Theme Healthcare - Health Promotion and Global Health, (1FY045, 7,5 credits), the topic covers planetary health, physical activity in relation to the sustainable development goals, planetary health-enhancing physical activity including active transport, planetary health diet, environmental, social and economic impact of a self-chosen physiotherapy intervention.</p> <p>6. During the lecture part of the course Healthcare - Physiotherapy in Primary Care (1FY044, 19,5 credits), the topic covers the healthcare sector's climate footprint and principles of Sustainable clinical and healthcare practice including lean care.</p>	

### Curriculum: Clinical Applications

<b>1.18. In training for patient encounters, does your physiotherapy school's curriculum introduce strategies to have conversations with colleagues and patients about the health effects of climate change?</b>	
Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework. (1 point)	
No, there are not strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	0
<p>Score explanation:</p> <p>The topic is only briefly mentioned as a side-topic within a couple of slides, in two lectures part of the course Intervention - Physiotherapy 3 (1FY026, 7,5 credits), and the course Healthcare - Physiotherapy in Primary Care (1FY044, 19,5 credits). This does not qualify for points.</p>	

### 1.19. In training for patient encounters, does your physiotherapy school's curriculum

<b>introduce strategies for taking an environmental history or exposure history?</b>	
Yes, the core curriculum includes strategies for taking an environmental history. (2 points)	
Only elective coursework includes strategies for taking an environmental history. (1 point)	
No, the curriculum does not include strategies for taking an environmental history. (0 points)	
Score Assigned:	0
Score explanation: To our knowledge, strategies for taking an environmental history or exposure history is currently not covered in the physiotherapy school curriculum	

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

<b>1.20. Is your physiotherapy school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH) / planetary health education?</b>	
Yes, the physiotherapy school is currently in the process of making major improvements to ESH/planetary health education. (4 points)	
Yes, the physiotherapy school is currently in the process of making minor improvements to ESH/planetary health education. (2 points)	
No, there are no improvements to planetary health education in progress. (0 points)	
Score Assigned:	4
Score explanation: Due to individual teacher efforts and support from the program director for the physiotherapy program, the undergraduate physiotherapy education is making progress in the implementation of sustainable development, planetary health and sustainable healthcare. However, the complexity of the topic and the sometimes lack of knowledge among teachers needs to be recognized, as well as the need for discussions on how to integrate the topic in the best way. The integration of these topics cannot rely on individual efforts.	

<b>1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?</b>	
Planetary health/ESH topics are well integrated into the core physiotherapy school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core physiotherapy student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s). (2 point)	

There is minimal/no education for sustainable healthcare. (0 points)	
Score Assigned:	4
<p>Score explanation:</p> <p>To our knowledge, planetary health/sustainable healthcare is integrated longitudinally into the core curriculum of the physiotherapy program. Several learning outcomes exist during year 1-3. However, the teaching and learning activities are dependent on only one teacher within physiotherapy and one within psychology. The topic needs to be built-in in several other courses by several teachers as a natural integrated part of the course content.</p>	

<b>1.22. Does your physiotherapy 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?</b>	
Yes, the physiotherapy school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the physiotherapy school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	1
<p>Score explanation:</p> <p>One teacher at the division of physiotherapy is responsible for overseeing the incorporation of education for sustainable development including planetary health and sustainable healthcare at the physiotherapy program. The staff member is an assistant senior lecturer, PT and PhD with research focus on education for sustainable development.</p>	

<b>Section Total (29 out of 66)</b>	<b>43.9%</b>
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# Interdisciplinary Research

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

## 2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your **physiotherapy school** or **institution**?

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

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

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

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

Score Assigned:

3

Score explanation:

At the division of physiotherapy specifically, there are faculty members who have a research focus in education for sustainable development, including planetary health and sustainable health care. Research results on education for sustainable development in physiotherapy was presented at the [NU2024](#). Exemplifying publications from the division of physiotherapy relating to planetary health, sustainable development and sustainable healthcare are: [Swärdh et al 2024 on Education for sustainable development](#), [Swärdh Et al 2024 on Education for sustainable development and sustainable health care](#), [Swärdh and Maric 2024 on Planetary health advocacy](#).

Whenever the scoring system distinguishes between the medical school and the institution, we refer to the departments of medicine [Solna](#) and [Huddinge](#) as KI's medical school and refer to KI's other departments as the institution. At the departments of medicine Solna and Huddinge there are faculty members who have a primary research focus in planetary health. Research groups at the nephrology department have done extensive research on heat-related kidney disease and [collaborated with other disciplines](#), e.g. specialists in biodiversity and ecology. We are not aware of any other medical disciplines within KI departments of medicine (Solna, Huddinge) involved in

PH research, ongoing research projects on sustainable health care, climate change mitigation, or other environmental crises within health care.

KI is home to the [Institute of Environmental Medicine](#) (IMM) which does public health research on heat epidemiology, air pollution, green spaces and links to cardiovascular diseases, respiratory diseases, allergies and nutrition. KI also contains several other health research organisations such as the [Centre of Excellence for Sustainable Health](#) (CESH), the [Global Public Health](#) (GPH) department, all of which investigate public health problems with some links to planetary health research.

Exemplifying publications from IMM and GPH relating to environmental health and clinical medicine are: [Yu et al. 2023 on lung function and air quality](#) and [Hellden et al. 2021 on pediatrics and climate change](#). Another exemplifying study is [Hallström et al. \(2023\)](#) which provides actionable insights into dietary priorities for reducing environmental burdens.

In addition, KI collaborates with the [Swedish Institute for Global Health Transformation](#) (SIGHT), as well as other universities (Uppsala, SU, KTH, Umeå) via workshops, conferences and other events to encourage cooperation in planetary health research. In 2021, the “One KI for Sustainable Development” project allocated resources for a call for research funding to encourage researchers at KI to engage with the Agenda 2030 and to further develop research aimed at meeting the SDGs. Five researchers were awarded funds of SEK 100-320 thousand each.

The Grants Office works to inform about funding opportunities linked to sustainable development. Within all of these named frameworks there is a potential to acquire new funding for interdisciplinary planetary health research within and beyond KI. As a possible role model for such activities, within Stockholm Trio Climate and Health involving Bolin Center, KTH Climate Action Center and KI, researchers have arranged several events broaching climate and health and are also planning a large scale study bringing in cross-disciplinary expertise to develop a collaboration center with projects studying climate and health.

In the [2022 update of the climate action plan 2030](#), KI has stated that it targets to increase research in the areas of climate change and health, climate-friendly healthcare, behavioral science research and prevention of ill health linked to climate change by 2024. In conclusion, KI is making significant efforts to produce planetary health research, and there is yet great potential within KI departments conducting medical research to include sustainability perspectives and planetary health considerations in ongoing research as well as further research at the intersect of clinical medicine, planetary health and sustainable health care.

#### Recommendations:

- Acquiring funding for research on sustainable health care, specifically on mitigation, that is, reducing the carbon footprint of the health care sector, within different medical disciplines at KI departments conducting medical research
- Adding environmental sustainability consideration sections as a prerequisites to any future (clinical) research project proposal at departments conducting medical research, similar to considerations on ethics and equity as prerequisites
- Further participation in collaborative engagements between KI departments conducting medical research and other institutes on transdisciplinary planetary health research, e.g.

cooperating with KTH Royal Institute of Technology on how to make single-use medical products reusable or at least recyclable

Further participation in collaborative engagements between KI departments conducting physiotherapy research and other institutes on transdisciplinary planetary health research, e.g. cooperating with KTH Royal Institute of Technology on how to make single-use medical products reusable or at least recyclable

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

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

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

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

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

Score Assigned:

3

Score explanation:

KI's [Institute for Environmental Medicine](#) (IMM) is directly involved in researching environmental health and the effects of environmental exposures on human health. At IMM, research is conducted in epidemiology, toxicology, physiology, environmental medicine and risk assessment. To our knowledge, IMM is currently actively involved in planetary health research within the realm of clinical medicine (see above).

In addition, IMM has the task to provide authorities with support regarding environmental health risk assessment. Other institutions at KI such as the [Centre of Excellence for Sustainable Health](#), the [Centre for Health Crises](#), the [Department of Global Public Health](#) and research groups on [global infections](#) and [STIs](#) all conduct public health research with some of which targeting vulnerable populations and providing supportive frameworks, but are not directly dedicated to interdisciplinary planetary health research. Recently, [SciLifeLab's Planetary Biology capability](#) was started to link molecular research to ecosystems and biodiversity research.

In the [2022 update of the climate action plan 2030](#), KI has stated that it targets one or more positions as professor, associate professor, assistant professor or postdoc in one or more of the areas of climate change and health, climate-friendly healthcare, and/or behavioural science research and prevention of ill health linked to climate change by 2024. The new version for 2025-2027 is currently drafted. There is currently still no **central** initiative or funding for positions within this

area, though there are positions at the departmental level. It has not been clearly stated how the Climate Action Plan goals have been followed-up or achieved.

Recommendations:

- Expanding research on planetary health at other institutions such as the Centre of Excellence for Sustainable Health, the Centre for Health Crises and the Global Public Health Department
- Founding an institute dedicated to planetary health and sustainable health care or dedicating a subdepartment to planetary health and another to sustainable healthcare
- Increase transparency and communication of how KI's 2030 Climate Action Plan objectives are being met, or what initiatives are being taken to ensure that they are going to be met. Adjust the Climate Plan if necessary, and be transparent about the hurdles of achieving these goals on time.

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

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

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

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

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

Score Assigned:

2

Score explanation:

Climate change in Uganda is particularly severe, with the country's climate being mostly tropical and climate change generating increasing patterns of extreme weather and seasonal changes. One of KI's largest [international collaborations is with Makerere University in Uganda](#). The partnership is manifested in a [Centre of Excellence for Sustainable Health](#). A delegation from KI travelled to Uganda in November 2024 to cement the 25-year old relationship. Within this strong partnership, disadvantaged communities are included in decision-making processes on the research conducted. The research centre states that climate change and health is one of four priority [research areas](#). There have further been several [seminars](#) organized by CESH which focus on planetary health.

The Institute of Environmental Medicine (IMM) has an overseeing board of several national authorities e.g. Public Health Authority, National Board of Health and Welfare etc. and collaborates with international organisations to help support interdisciplinary planetary health research in disproportionately affected communities. In India, where climate change is a serious public health



concern particularly on the level of air pollution, the Consortium for Climate, Health & Air Pollution

Research in India ([CHAIR-India](#)) links environmental data to health datasets, and studies associations of short- and long-term air pollution and temperature with mortality and cardiometabolic and respiratory disease in rural and urban areas across India. KI has ongoing studies aiming to better understand health effects of air pollution, collaborating with CHAIR-India databases and FORMAS (a sustainable research fund in Sweden). This research will help Indian organisations better understand the health effects of climate change in their own population and environment. However, these Indian communities disproportionately affected by climate change do not hold decision-making power for the planetary health research agenda at KI.

Karolinska Institutet collaborates with international organizations like [WHO to improve disaster preparedness and response](#). While these projects aim to support communities facing climate-related disasters, the websites do not indicate a process for these communities to directly influence the research agenda.

Recommendations:

- Engage communities disproportionately affected by climate change (Ugandan and Indian collaborators, Sami indigenous people) through discussions and interviews to enhance the research agenda in KI. For indigenous groups like the Sami and northernmost Scandinavian, focus on understanding cultural practices to develop sustainable strategies that respect their autonomy and help preserve their way of life.
- Make co-design, a process where researchers and the affected communities collaboratively plan research, mandatory for studies on communities disproportionately impacted by climate change and environmental injustice.
- Investigating the effects of global warming and increases in temperature on vulnerable populations such as geriatric populations. Particular emphasis on pharmacology, with certain drugs (ex. psychiatric drugs) having pharmacological interactions severely altered upon small environmental temperature increases or during excessive heat waves.

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

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

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

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

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

Score Assigned:

3



Score explanation:

[Pages that directly address KI's environmental impact, current and future efforts](#) to reduce KI's carbon footprint, [options for faculty and students to get involved in sustainable development](#), and [contributions to the field of planetary health research](#) do exist on KI's website as well as partner websites. KI has a Council for Sustainable Development, and two coordinators for sustainable development. KI further has a "[Sustainable Development](#)" website, pooling all work related to the SDGs. This website is comprehensive and easy to use. The Project One KI for Sustainable Development is promoted here which currently leads to a web course in SDGs for all affiliated or employed at KI.

Previous work in this project includes workshops and [conferences on sustainable development](#) which attracted scientists from multiple fields, and two announcements of research grants that ultimately funded researchers from different KI departments. The Sustainable Development website also clearly lists upcoming and past events relating to sustainable development at KI. It also shows news articles about recent advancements in the understanding of planetary health and promotes current sustainability goals at KI. KI has interviewed multiple involved people in the medical sector to show [consequences of fossil fuel use and global warming](#) as well as the connections to the human health.

Recommendations:

- Generating internet pages for KI's direct contributions to planetary health research providing data and publications with easy access. Promoting these pages on KI's official website. Promoting these websites on the websites of KI departments conducting medical research.
- Continuing to linking and emphasising health co-benefits of sustainability efforts on KI's websites related to sustainability efforts such as [in this article](#), e.g. transitioning from fossil to renewable energy sources at KI improves respiratory and cardiovascular health due to a decrease in air pollution; promoting public transport and bikes at KI improves air quality and cycling can have benefits for physical and mental health; and, mainstreaming plant-based diets at KI is beneficial to the environment and our health).

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

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

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

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

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

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

Score Assigned:

3

Score explanation:

KI has (co-)hosted the following events in the last year (2024-2025):

- [Global Conversation on Sustainable Health](#)
- [KI's Sustainability Day](#)
- [Student Competition - Climate and Health: A Vision for Stockholm 2029](#)
- [Workshops "Exploring head, heart and hands in teaching and learning for planetary health" at the Education Congress](#)
- [Workshop on Sustainability champions](#)
- [Discussion on Key Competencies for Sustainable Health](#) (non-public)
- Book release "Nature's Intelligence" by Peter Stenvinkel
- [Animal research at KI. Present and future activities in relation to ethics and animal welfare](#)
- [SciLifeLab Planetary Biology 2024 Conference](#)

However, there are no apparent conferences in place for Sustainability in Health Care.

Recommendations:

- Launching conferences with topics related to sustainable health care and emphasising this topic at the many existing conferences at KI departments conducting medical research
- Encouraging students to propose themes and lead sessions or workshops during such symposiums.
- Continuing to develop and host the above-mentioned and similar events

## 2.6. Is your **physiotherapy school** or **institution** a member of a national or international planetary health or ESH/ESV organisation?

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

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

Score Assigned:

1

Score explanation:

KI has held a membership in the [Planetary Health Alliance](#) since 2022, along with SU and KTH, and the Association for Medical Education in Europe. With regards to this, KI's contact person for the Planetary Health Alliance and faculty mentor for this report, professor Peter Stenvinkel, PhD MD, will once yearly submit ongoing activities related to Planetary Health to the Council for Environment and Sustainable Development. KI has joined the [Global Consortium on Climate and Health Education](#) and intends to join its European network, however KI has been an inactive member. We are unaware of any specific involvement of the departments conducting medical research with these organisations.

Recommendations:

- KI should actively promote the [mass open online courses](#) offered by the [Global Consortium on Climate and Health Education](#)
- KI departments conducting medical research should actively engage in these networks
- KI should endorse participation in the [Planetary Health Report Card](#)

**Section Total (15 out of 17)**

**88.24%**

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# Community Outreach and Advocacy

**Section Overview:** This section evaluates the institutions 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.

## Note from the KI PHRC workgroup:

Karolinska Institutet scores rather low in this section, as it seemingly does not partner with community organizations. The university has a lot of partnership with professional organizations and other universities (such as the region Stockholm and Stockholm trio), which are not included in the currently used definition of community organisations. To give suggestions/possibilities of community outreach and advocacy, the PHRC workgroup will map community organisations that Karolinska Institutet could partner with in the future.

3.1. Does the <u>institution</u> partner with community organisations to promote planetary and health?	
Yes, the <b>institution</b> meaningfully partners with <b>multiple</b> community organisations to promote planetary and environmental health. (3 points)	
Yes, the <b>institution</b> meaningfully partners with <b>one</b> community organisation to promote planetary and environmental health. (2 points)	
The <b>institution</b> does not partner with community organisations, but participates in community focused events relating to planetary health. (1 point)	
No, there is <b>no</b> such meaningful community partnership. (0 points)	
Score Assigned:	1
Score explanation:  We are unaware of any partnership between KI and community organisations affected by climate change. The <a href="#">Center for Health Crises</a> is a KI centre focuses on research, education and interdisciplinary collaboration with the aim to increase capabilities to handle future health crises.  Other than that, KI is part of the <a href="#">United Nations Sustainable Development Solutions Network (SDSN)</a> that “connects Nordic universities and other knowledge institutions to go from knowledge to action for the SDGs”.  The <a href="#">environment and climate action plan 2021-2024</a> formulated several collaborative goals for 2024. However, now, in 2024, none of the “several society-wide projects” proposed have been identified and information about the outcome of the action plan is yet to be released.	

Furthermore, KI is starting to collaborate with the region Stockholm to further sustainable development and sustainable healthcare. Though not a community organisation in the strict sense of the word, we decided to award KI one point in this category as all these efforts together contribute towards promoting planetary health in the wider community (both in Stockholm and abroad).

### 3.2. Does your physiotherapy school or institution offer community-facing courses or events regarding planetary health?

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

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

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

The Physiotherapy school or institution have not offered such community-facing courses or events. (0 points)

Score Assigned:

1

Score explanation:

KI has participated in and hosted events such as the following ones in the last year that were partly open to the public, however, to our knowledge, few of them were primarily created for a public audience, and none were hosted directly by the departments conducting medical research:

- [News & Events | CESH](#)
- [Environmental and sustainability efforts at Biomedicum](#)
- [KI's Sustainability Day 2025](#)

KI offers the following courses that are available to access for the public:

- [KI web course: Getting Started with the SDGs](#)
- [Introduction to social, economic and environmental sustainability and health](#)

KI also offers the next freestanding courses in English:

- [Sustainable Health and Development. | Karolinska Institutet](#)
- [Global Health and Disaster | Karolinska Institutet](#)
- [Public Health Response in Health Crisis and Disasters | Karolinska Institutet](#)
- [Qualitative Research and Evaluation Methods in Disasters | Karolinska Institutet](#)

All of these require 180 credits in a science field, the first one, 120 credits and the third one, 210.

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

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

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

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

Score Assigned:

1

Score explanation:

The Department of Medicine, Solna and the Department of Oncology and Pathology have a standing point on sustainability in their newsletters, though many other departments do not.

The department Neurobiology, Care Sciences and Society (NVS) also have set up a [webpage on planetary health](#). At the same time-point NVS started its “[Environmental and Climate Awareness year](#)” where employees will be able to take part in different activities such as a [survey](#), [lectures & workshops](#), [challenges](#) and [written materials](#) at the webpage. However, this is only aimed at staff and PhD students and not physiotherapy students.

Furthermore, while KI’s regular communication channels such as the [KI student newsletter](#), [KI Calendar](#) and medical newsletter do not have a dedicated space for sustainability issues, they include seminars or activities related to sustainability or planetary health that have been done or are planned. When specific events or occasions are planned or have taken place, these are featured on KI’s news channels and information is disseminated on public screens on campus. Initiatives such as courses organised by single researchers are applauded, included in and spread via KI’s new channels.

Overall, sustainability is covered on a quite recurrent basis, but planetary health is covered rather sporadically in KI’s news outlets.

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

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

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

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

Score Assigned:	0
<p>Score explanation:</p> <p>KI offers a <a href="#">1-hour online course on the SDGs</a> and on how to implement them in teaching activities. KI targets include the SDGs in its graduate and post-graduate education as part of the Intended Learning Outcomes from 2024 onwards.</p> <p>However, this course does not specifically target post-graduates but is rather aimed at KI teaching staff. It does not have as a main aim of ensuring the professionals' knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career.</p> <p>The senior assistant lecturer Emma Swärdh has been awarded with <a href="#">KI's Sustainability Award 2024</a> for her dedication and leadership to raise awareness of climate and health, as well as for sustainable development.</p> <p>Last year we awarded a point for this question, but as the audience of these activities is internal, we decreased the score.</p>	

<b>3.5. Does your <u>physiotherapy school</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?</b>	
Yes, the <b><u>physiotherapy school</u></b> or <b><u>all affiliated hospitals</u></b> have accessible educational materials for patients. (2 points)	
<b>Some</b> affiliated hospitals have accessible educational materials for patients. (1 point)	
<b>No</b> affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	1
<p>Score explanation:</p> <p>To our knowledge, KI departments of medicine and Karolinska University Hospital currently do not provide dedicated educational materials regarding environmental health exposures to patients.</p> <p>However, all the hospitals in the area fall under the umbrella of the Region Stockholm, which has a <a href="#">Center of Occupational and Environmental Health</a> that has easily accessible information about air pollution, noise, chemicals, outdoor tobacco smoke, inequalities regarding environmental health, and further environmental exposures that affect health.</p> <p>In addition to that, educational material with specific focus on work environment is included in the medical programme and is <a href="#">produced by SBE</a>. It however does not mention planetary health or climate change and its effects on occupational health.</p>	

Given that the hospitals in the region have patient materials about environmental health exposures, but KI and Karolinska University Hospital do not, we award one point.

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

Yes, the **physiotherapy school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)

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

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

Score Assigned:

1

Score explanation:

To our knowledge, KI departments of medicine and Karolinska University Hospital currently do not provide dedicated educational materials regarding climate change and its health impact to patients.

However, all the hospitals in the area fall under the umbrella of the Region Stockholm, which has a [center of Occupational and Environmental Health](#) that has easily accessible information about [climate change](#) and about environmental exposures that affect health, such as, for example, air pollution, noise, chemicals, outdoor tobacco smoke and inequalities regarding environmental health.

In addition, the teaching material includes current information about environmental risks: [heat waves as a threat against health](#).

Given that the hospitals in the region have patient materials about climate change and its health effects, but KI and Karolinska University Hospital do not, we award one point.

**Section Total (5 out of 14)**

**35.71%**

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# 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 **institution** offer support for students interested in enacting a sustainability initiative/QI project?

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

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

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

Score Assigned:

2

Score explanation:

Groups, individuals, students, and staff at KI are eligible to receive [the Sustainability Award](#), upon decision from the [KI's Council for Environment and Sustainable Development](#). Last year there were three nominations, two groups of teachers and one individual teacher. A certificate and money are given to the recipient(s) to further develop or improve initiatives at KI. Although students are eligible to receive this award upon recognition of their sustainability initiatives, nomination is done by a head of department and directors, so it is a bit unclear how students themselves can secure a nomination.

KI's Centre for Health Crises and Centre of Excellence for Sustainable Health also hosts a student competition for a climate-neutral Stockholm in collaboration with KTH Climate Action Centre and the Bolin Centre at Stockholm University. However, this competition, titled "[Climate and Health: A Vision for Stockholm 2029](#)", does not mention any grants available for the winner.

[KI's Council for Environment and Sustainable Development](#) has funded the 2023, 2024 and 2025 SSD Sustainable Research Week, a student-led initiative that touches upon sustainable laboratory practices, alternatives to hazardous chemicals and animal models and integrating principles of social sustainability into the research environment.

In addition, KI provides the Minor Field Studies (MFS) scholarship program, which allows both undergraduates and advanced level students to conduct field research in low and middle-income countries and collect data for their degree projects. Their projects need to link to one or more UN SDGs.

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

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

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

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

Score Assigned:

1

Score explanation:

There are opportunities for medical students to perform research related to planetary health topics. The Institute of Environmental Medicine at Karolinska Institutet ([IMM](#)) or the Centre of Excellence for Sustainable Health ([CESH](#)) are more focused on research in sustainability. However, these require the students' own initiative and are not a part of the medical program. There is no specific research program related to planetary health/sustainable healthcare research for medical students.

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

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

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

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

Score Assigned:

2

Score explanation:

Karolinska Institutet (KI) has [One KI for Sustainable Development webpage](#) that lists all of KI's research, education, documents, and collaborative works regarding sustainability. The page has a news section that focuses on sustainability in KI and is updated at least once a month. The page

also contains links to bodies in KI that work on developing sustainable environments, such as the Council for Environment and Sustainable Development and Environmental Coordinators, as well as links to research centres that focus on planetary health and sustainability. The page has been recently updated, in June of 2024.

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

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

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

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

Score Assigned:

2

Score explanation:

Within KI's student union (Medicinska Föreningen), there is an official committee called [Students for Sustainable Development](#) (SSD), which is dedicated to engaging students in sustainability-related projects, not only in healthcare but also for general sustainability. SSD promotes sustainability on social media and on campus, and provides a social platform for students at KI. However, at the departments of medicine themselves, there is no specific student sustainability group.

The Council for Environment and Sustainable Development at KI provided funding for the venue for the Sustainable Research Week organised by Students for Sustainable Development in spring 2024. The council has also helped with promotion and organisation of the event. Additionally, the Council reserves seats for SSD members to represent their interests in meetings. However, no recurrent or systematic support or interest have been shown from faculty members of the medical school.

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

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

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

Score Assigned:	1
<p>Score explanation:</p> <p>In <a href="#">KI's Council for Environment and Sustainable Development</a>, an advisory board to decision-making bodies at Karolinska Institutet, there are student representatives who are elected through the student union, Medicinska Föreningen (MF). Although this Council lacks executive power, it plays a crucial role in disseminating knowledge about sustainability, discussing environmental issues, and preparing sustainability-related proposals for action plans within the university.</p> <p>The council includes a co-opted seat for one representative from Students for Sustainable Development (SSD).</p>	

4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	Score
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	0
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.	0
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
<p>Score explanation:</p> <ul style="list-style-type: none"> <li>• <b>Projects:</b> no points awarded</li> <li>• <b>Speaker series:</b> <ul style="list-style-type: none"> <li>○ Karolinska Institutet (KI), under the Alumni Lecture Series, hosted <a href="#">a lecture on 'Sitting still- the greatest health issue of our time'</a>.</li> <li>○ An interactive workshop was organised by the KI Lifestyle4Health network on how common public diseases can be prevented.</li> <li>○ The KI <a href="#">Council for Environment and Sustainable Development</a> organised the KI Sustainability Day 2024 to increase knowledge of sustainability issues and provide tools and inspiration for students and staff at KI to contribute to a sustainable future.</li> </ul> </li> </ul>	

<ul style="list-style-type: none"> <li>○ KI organised The Sustainable Research Week in which keynote speakers, researchers as well as science company representatives from all over the world, shared their knowledge and experience on the role of sustainability in research, current sustainability issues along with possible solutions.</li> <li>○ seminar: <a href="https://news.ki.se/calendar/stockholm-trio-seminar-interdisciplinary-research-and-education-for-sustainable-development">https://news.ki.se/calendar/stockholm-trio-seminar-interdisciplinary-research-and-education-for-sustainable-development</a></li> <li>● <b>Events:</b> <ul style="list-style-type: none"> <li>○ The KI Health Promotion team trained a few students from each course to instruct ‘Movements Snacks’, which are short 5-7 minute exercise regimes, for their classes during breaks or between lectures to encourage physical activity among students.</li> <li>○ ‘Fix-your-own bike’ workshops were organised in collaboration with Bon Mécanique.</li> <li>○ The workshop <a href="#">FOODSHIFT Pathways   Karolinska Institutet</a> provided educational personal with information and tools on how to teach young people to be more sustainable focusing on the food crisis and food waste.</li> </ul> </li> <li>● <b>Cultural events:</b> <ul style="list-style-type: none"> <li>○ A <a href="#">workshop focused on integrating arts</a> in humanities and medical science was held this year.</li> <li>○ <a href="https://news.ki.se/calendar/ki-culture-day-2024-perception-in-focus-arts-science-and-human-experience">https://news.ki.se/calendar/ki-culture-day-2024-perception-in-focus-arts-science-and-human-experience</a></li> </ul> </li> <li>● <b>Volunteer opportunities:</b> No points awarded.</li> <li>● <b>Wilderness/outdoor programs:</b> <ul style="list-style-type: none"> <li>○ KI organised a ‘<a href="#">fun run</a>’.</li> <li>○ Every term the <a href="#">KI sports day</a> takes place</li> </ul> </li> </ul>
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<b>Section Total (12 out of 15)</b>	<b>80%</b>
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# Campus Sustainability

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

<b>5.1. Does your <u>institution</u> have an Office of Sustainability?</b>	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is <b>at least one designated staff member</b> for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but <b>no specific staff member</b> in charge of hospital sustainability. (2 points)	
There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee. (1 point)	
There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
Score explanation:  There is an <a href="#">Office of Sustainability</a> at KI with one or more full-time staff member(s) dedicated to campus sustainability. This is also true for the University Hospital which has a <a href="#">Sustainability Unit</a> , and environmental coordinators. When it comes to the medical school, however, no specific staff member is in charge of sustainability. There is one staff member that works part-time on the development of the medical curriculum with respect to the incorporation of Planetary Health.  There are two environmental coordinators currently employed full-time at KI. Additionally, there is an employee, who works 4 hours per week with communication on sustainability. Together with departmental environmental representatives (whose tasks fall within the scope of their employment) and the Council for the Environment and Sustainable Development, they implement the university's sustainability policies.	

<b>5.2. How ambitious is your <u>institution's</u> plan to reduce its own carbon footprint?</b>	
The institution has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2030</b> (5 points)	
The institution has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2040</b> (3 points)	

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

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

Score Assigned:

1

Score explanation:

No goal of carbon neutrality has been stated by the university. However, KI has signed the [Climate Framework](#) (an agreement between 37 Swedish universities) which states that all participating universities shall have implemented measures in order to be in line with the 1.5°C target of the Paris Agreement by 2030. A 50% reduction of greenhouse gas emissions should be realised by 2030 according to [KI's Climate Strategy 2030](#). In order to cut back on greenhouse gas emissions, KI has executed an extensive top-down [carbon mapping operation](#).

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

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

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

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

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

Score Assigned:

2

Score explanation:

According to the environmental report for Karolinska Institutet 2024 94% of KI's energy consumption (electricity, heating and cooling) is from renewable sources, and when it comes to electricity and cooling 100% is from renewable sources.

In the past years, Akademiska Hus [has put up solar panels on roofs](#) on the KI campus in order to produce (a portion) of the energy locally.

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

Yes, sustainable building practices are utilised for new buildings on the institution's campus and the <b>majority</b> of old buildings <b>have been retrofitted</b> to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have <b>not been retrofitted</b> . (2 points)	
Sustainable building practices are <b>inadequately or incompletely</b> implemented for new buildings. (1 point)	
Sustainability is <b>not considered</b> in the construction of new buildings. (0 points)	
Score Assigned:	3
<p>Score explanation:</p> <p>New buildings at the university campus (such as the new hospital buildings and <a href="#">research buildings</a>) have been built in accordance with Miljöbyggnad guidelines and have received overall rating levels of Gold or Silver. <a href="#">In 2014, the new hospital building in Solna received LEED gold certification.</a> According to the <a href="#">Lokalförsörjningsplan 2023-2026</a> renovation projects should have a Miljöbyggnad rating of at least silver, though Akademiska Hus strives for a gold rating except for student accommodation. The <a href="#">renovation of the CMB building is an example of this</a>, however this building will be rented out to different companies and not KI. To reduce the need for travel, KI is setting up/has set up hybrid meeting options in most lecture halls and meeting rooms.</p>	

<b>5.5. Has the <u>institution</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?</b>	
Yes, the institution has implemented strategies to encourage and provide <b>environmentally-friendly transportation options</b> such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented <b>some</b> strategies to provide environmentally-friendly transportation options, but the options are <b>unsatisfactorily</b> accessible or advertised. (1 point)	
The institution has <b>not</b> implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	2
<p>Score explanation:</p> <p>KI is very well connected to public transport and safe active transport (e.g. bike lanes), and almost all students are using these options. <a href="#">A bus connects both campuses (Solna and Flemingsberg) that KI students can use free of charge.</a> KI also offers safe, indoor parking stations for bicycles. <a href="#">KI has organised and offered free bicycle fixing workshops to staff and students during spring/summer to promote cycling.</a></p>	



KI does not directly subsidise public transportation for its students. However, KI students do benefit from [reduced fares on public transportation through Sweden's Mecenat system](#), recognised by KI. Information about environmentally-friendly public transport is provided during orientation, but emphasis is not placed on the importance of using sustainable transportation for planetary health reasons.

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

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

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

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

Score Assigned:

2

Score explanation:

KI has [recycling programs accessible to students, faculty](#) and staff and a food waste collection program in lunch rooms [across the campus has been implemented](#).

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

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

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

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

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

Score Assigned:

2

Score explanation:

KI emissions from food and restaurants compose around 1500 tons of CO<sub>2</sub>, which accounts for 3-4% of KI's annual emissions (2019). A calculation within the [climate mapping 2019](#) on measures for reduction of KI's climate impact showed that by only serving vegetarian dishes 2 days a week compared to serving only meat and fish dishes, it would be possible to reduce university emissions

within the food category by 27%. The university is now promoting sustainable choices by indicating [One Planet Plate](#) compliancy in at least [one of their restaurants](#), though similar policies (CO2 emissions per dish, more plant-based options, etc.) have been suggested to be implemented in all campus restaurants. Individual departments and units such as [CNS](#), [CLINTEC](#) and the KI library also recommend plant-based food.

Even though the general goal of “greatly reducing greenhouse gas emissions from goods, services, food and waste” is stated in the sustainability guidelines, there are no clear aims stated in the Climate Strategy for 2030 to address sustainability of food and beverage served. No current guidelines exist regarding catering at KI events.

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

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

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

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

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

Score Assigned:

2

Score explanation:

While there are extensive plans to set sustainability and climate requirements in all procurements, tenders and purchases, where possible, there are currently no university-wide sustainability requirements for supply procurement (e.g. similar to the [requirements for suppliers brought forward by the National Health Service in England](#)). Still, results from KI’s climate mapping indicate that the most extensive climate-damaging emissions are coming from the purchase of goods (approximately 45% of emissions). During 2023, on behalf of the Council for Environment and Sustainable Development, a working group has developed proposals to contribute to reducing the negative environmental impacts of KI’s consumption of goods and services. A report was handed over to the President to whom the Council reports.

According to the 2022 update of the KI 2030 climate action plan, [KI intends to have knowledge of its emissions from the consumption of goods and services by 2024](#). In the same year, sustainability and climate requirements shall be set in all relevant procurements, calls and purchases, where possible. The requirements shall be followed up on. Up to this point, these guidelines are not binding and only optional recommendations.

Individual departments such as the [Department of Dentistry and the University Dental Service](#) are [environmentally certified according to ISO 14001:2015](#), which includes that environmental requirements are set for procurements and followed up during the contract period. 20% of procured suppliers in prioritised purchasing categories must be audited each year.

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

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

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

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

Score Assigned:

1

Score explanation:

KI has a [guide on “Sustainable meetings”](#) for events hosted at and by KI, including but not limited to aspects such as energy use, purchases, food choices, transport, accessibility and waste management. The guide is based on Agenda 2030, the UN's 17 Global Goals for sustainable development and KI's guidelines for the environment and sustainable development. Using the guide and [check-list](#) is strongly recommended, however not required

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

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

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

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

Score Assigned:

1

Score explanation:

According to [the carbon mapping KI did in 2019](#), purchase of goods is the largest emission source at KI, with 45% of total emissions. Laboratory equipment as well as chemicals and pharmaceuticals account for the majority of emissions in this category. When it comes to real estate, laboratory energy use contributes the most to KI's emissions, as KI's large laboratory premises for educational and research activities have large energy requirements.

[Currently, the department of Neurobiology, Care Sciences and Society has a dedicated web page with information on how to make lab spaces more environmentally sustainable](#), and links to their Environment and Sustainability Representative for further questions. Information includes further links to MyGreenLab, network opportunities that are not organized by KI, and the use of safer chemicals. In addition, in 2024, a research group at the department of clinical science, intervention and technology (CLINTEC) was the first group at KI to conduct an assessment for certification according to My Green Lab.

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

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

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

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

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

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

Score Assigned:

3

Score explanation:

Based on email correspondence with KI staff, we believe the university has divested entirely from fossil fuels. However, no public statement has been made regarding divestment, and we would recommend KI doing so [in line with other Swedish universities](#).

**Section Total (22 out of 32)**

**68.75%**

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# 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.

## Planetary Health Grades for the School of Physiotherapy

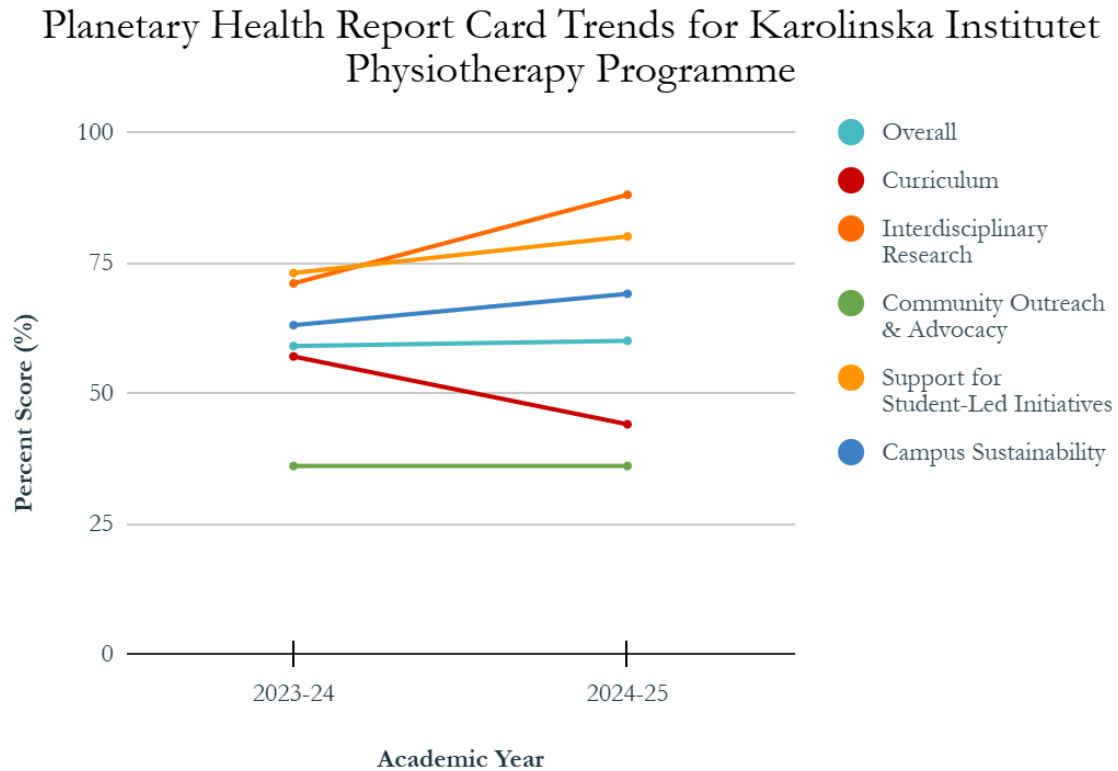
The following table presents the individual section grades and overall institutional grade for Karolinska Institutet, Physiotherapy program on this physiotherapy-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
<b>Planetary Health Curriculum (30%)</b>	$(29/66) \times 100 = 43.9\%$	C-
<b>Interdisciplinary Research (17.5%)</b>	$(15/17) \times 100 = 88.2\%$	A
<b>Community Outreach and Advocacy (17.5%)</b>	$(5/14) \times 100 = 35.7\%$	D+
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	$(12/15) \times 100 = 80\%$	A-
<b>Campus Sustainability (17.5%)</b>	$(22/32) \times 100 = 68.8\%$	B
<b>Institutional Grade</b>	<b>60.1%</b>	<b>B-</b>

# Report Card Trends

## Section Overview

This graph demonstrates trends in overall and section grades for the years in which Karolinska Institutet has participated in the Planetary Health Report Card initiative.



As can be seen in this graph, the score for curriculum has decreased considerably between 2023-24 and 2024-25. This is a result of the questions in the PHRC being much more specific to physiotherapy and the clinical practice of physiotherapists.