



Planetary Health Report Card

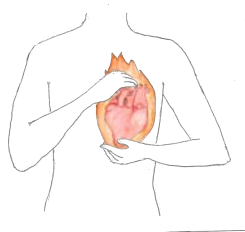
2023 Resultater för Karolinska Institutet

**Workshop om hållbar utveckling, SDGs, klimatmedicin, hållbar sjukvård
och planetär hälsa**

Lärardagen 27:e september 2023

Kontakt: nikolaus.mezger@stud.ki.se

Who are we?



Clara Brune¹, Daniel Doyon², Aleksandra Elwertowksa³, Patricia Grill³, Clara Kihlberg¹,
Judy Fabienne Kool^{3,4}, Niels Krämer², Nikolaus Mezger MD³, Viivi Sairanen MD^{1,4}

1: Medical programme; 2: PhD student; 3: Global Master's student; 4: KI alumnus

Why are we here?



“Issues around climate change can be overwhelming and people can feel powerless to do anything to address this issue. Health care professionals are no different in that sense.”

Darcy Freedman, PhD, MPH

The medical students' perspective: Campaign "Vår hälsa brinner"

- Our survey: medical students experience lack of knowledge on climate change
- We believe that ...
 - The priority should be higher
 - The subject should be more *integrated* in the education
 - Clinical supervisors must be sufficiently prepared



What did we do so far?

Open letter to KI leadership on education: 130 signatories

Stockholm, December 2022

Empowering KI students and teachers to lead transformational change in healthcare and beyond

A call for longitudinal implementation of planetary health and sustainability education at Karolinska Institutet

Authors: Clara Brune^{*,1,2}, Ester Gubi³, Judy F. Kool^{4,5}, Nikolaus C.S. Mezger^{3,5,6,7}, Viivi V. Sairanen^{1,5}

*: alphabetical order

1: Medical Programme, Karolinska Institutet

2: International Federation of Medical Students Associations (IFMSA) - Sweden

3: Department of Global Public Health, Karolinska Institutet

4: Master's Programme in Toxicology, Institute of Environmental Medicine (IMM), Karolinska Institutet

5: Students for Sustainable Development (SSD) at KI, Medicinska Föreningen

6: Fullmäktige (FuM), Medicinska Föreningen

7: German Alliance on Climate Change and Health (KLUG)

<https://docs.google.com/document/d/1VMVbfhz4Avi6OBTtu619i3QVGZhdzwVCdjm14vuGq0M>

<https://docs.google.com/spreadsheets/d/1cgZJKLlrJ-SHFBzVvzESX9gRrMPfWhEzHpDjfrtAcPA/edit>

What did we do so far?

The Planetary Health Report Card (PHRC)

SWEDEN

You can find report cards for participating medical schools from Japan here!
Click on the buttons below to access report cards for the designated year.

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z





Karolinska Institutet
2023 REPORT CARD

Summary of Findings	
Overall evaluation	C
Curriculum (40 of 72 points)	C+
<ul style="list-style-type: none"> Karolinska Institutet (KI)'s medical programme lacks longitudinal integration of planetary health in the current curriculum, with related aspects only being discussed in the last semesters. In the new 6-year curriculum under development, students will learn about planetary health from the 2nd semester onwards. Recommendations: KI's medical programme lacks teaching on sustainable health care. Mitigation of and adaptation to the climate crisis should be included in clinical subjects, workshops and seminars. 	
Interdisciplinary Research (13 of 17 points)	B+
<ul style="list-style-type: none"> KI conducts extensive research on environmental health, though research on sustainable health care is scarce. While there are many collaborations, the departments of medicine, Solna and Huddinge, are not often involved. KI has hosted conferences on planetary health, but few were aimed at medical students. Recommendations: Information on ongoing research, funding opportunities and transdisciplinary cooperation should be easily accessible on KI's website. KI's departments of medicine could organize conferences on clinical aspects of planetary health. Adding sustainability as a prerequisite to research proposals could facilitate rapid up-scaling of activities related to sustainability and planetary health. 	
Community Outreach and Advocacy (5 of 14 points)	D+
<ul style="list-style-type: none"> KI did not organize events related to planetary health or sustainability with the general public as the primary audience. Nor are we aware of any ongoing cooperation with community organizations. In its internal communication, KI covers named topics on a recurrent basis, intends to pilot a cooperation with MyGreenLab, and has initiated some courses directed at teachers at KI. KI intends to have a dialogue with the region Stockholm on how to work jointly on climate issues. Recommendations: KI in general and KI's departments of medicine specifically should actively collaborate with public, community and patient organizations to create and sustain meaningful planetary health-related solutions in Stockholm, Sweden, and partnering countries such as Uganda. 	
Support for Student-Led Initiatives (8 of 15 points)	C
<ul style="list-style-type: none"> KI supports student groups dedicated to planetary health by providing infrastructure, online presence, and faculty support. Students advise KI on work related to planetary health and sustainability. However, there are few platforms for co-creation that involve students. No KI funding supports student initiatives related to planetary health, nor is there active support from the departments of medicine. Recommendations: Support for student-led initiatives should also come from the medical school, with a focus on activities and grant opportunities. This way medical students could learn more about and contribute to planetary health and sustainable healthcare in a tailored way. 	
Campus Sustainability (10 of 32 points)	D
<ul style="list-style-type: none"> KI intends to lower its carbon footprint by 50% by 2030 and adhere to policies in line with the Paris agreement and the 1.5°C target. The institution currently focuses on the impacts of its daily operations, but recommendations are optional and few meaningful actions have been taken. There is no net zero goal. Recommendations: More, mandatory and scaled-up action needs to be taken with regards to KI's daily operations. We recommend that KI analyzes its financial assets, divests from fossil fuels, reinvests into renewable energy, and joins WHO advocating to phase out fossil fuels: fossilfueltreaty.org/health-letter 	







"The planetary health report card is a world-wide student-driven, faculty-supported initiative that seeks to evaluate medical universities' performance using comparable and evidence-based metrics related to planetary health and sustainability": <https://phreportcard.org>

What is the PHRC?







Metrics/scoring system

Planetary Health Curriculum	A	B	C	D	E	
Interdisciplinary Research in Health and the Environment	A	B	C	D	E	
Community Outreach and Advocacy in Environment and Health	A	B	C	D	E	
Support for Student-Led Planetary Health Initiatives	A	B	C	D	E	
Campus Sustainability	A	B	C	D	E	
Overall Score	A	B	C	D	E	







Where does KI stand in 2023?

Planetary Health Curriculum	A	B	C+	D	E	
Interdisciplinary Research in Health and the Environment	A	B+	C	D	E	
Community Outreach and Advocacy in Environment and Health	A	B	C	D+	E	
Support for Student-Led Planetary Health Initiatives	A	B	C	D	E	
Campus Sustainability	A	B	C	D	E	
Overall Score	A	B	C	D	E	

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Planetary Health Curriculum	A	B	C+	D	E	
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Campus Sustainability	A	B	C	D	E	
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Planetary Health Curriculum	A	B	C+	D	E	
Interdisciplinary Research in Health and the Environment	A	B+	C	D	E	
Community Outreach and Advocacy in Environment and Health	A	B	C	D+	E	
Support for Student-Led Planetary Health Initiatives	A	B	C	D	E	
Campus Sustainability	A	B	C	D	E	
Overall Score	A	B	C	D	E	



**Karolinska
Institutet**

Commentary of student report

Stockholm, 2023-05-31

Department

Study program in Medicine

KI and the Planetary Health Report Card initiative

KI is appreciative of our students' participation in this valuable work, intended to strengthen teaching of sustainability and planetary health. We have thus facilitated their work by providing some of the data, which regrettably is not exhaustive, due to an ongoing mapping process.

As stated, we are in the process of implementing a new curriculum, which first started in 2021. The current report, covering 2022-2023, mainly reflects late parts of the old curriculum (semesters 4-11) and only the two first years of the new curriculum.

Compared to the prior one, the new curriculum will have more pronounced sustainability-related learning outcomes and the planetary health report card may prove helpful in providing ideas for future learning activities. We aspire to reach higher scores in the years to come and encourage our students to follow up on this work.

Ass. Professor Marie Dahlin

Program Director

Medical Program
Karolinska Institutet

Ass. Professor Karin Leander

Program Coordinator of Global and equal
health and healthcare competencies

Medical Program
Karolinska Institutet



- Currently, planetary health is discussed in one course ("Public Health and Environmental Medicine"):
 - in depth: heat and air pollution
 - in brief: mental health, extreme weather, food insecurity, inequity
- Health co-benefits of a plant-based diet are briefly covered in one course
- KI offers one elective course: "Sustainable Health and Development"
- Carbon footprint of the health care system is not covered



- No education in specific subjects
e.g., internal medicine, obstetrics, paediatrics, physiology, ethics, ...
- No education on environmental impact and mitigation strategies
 - surgical health care
 - anaesthetic gases
 - metered dose inhalers
 - medical waste production
 - over-medicalisation, over-treatment and over-diagnosis
- No education on having conversations with patients on climate change
- Very little education on environment + health co-benefits of non-pharmaceutical interventions e.g. exercise/biking for NCDs, "good for your health and the environment"

Changes in the new 6-year medical program

examples that we know of, according to our latest information

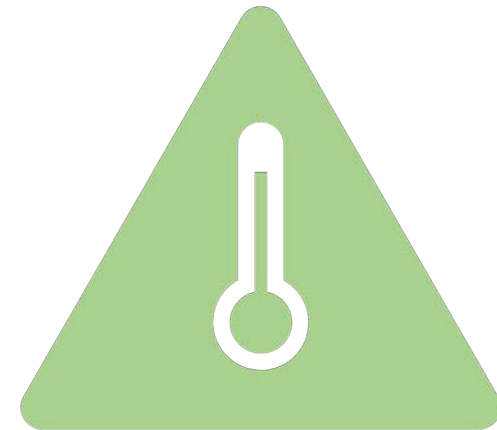
- Following the new national medical syllabus, some aspects on climate change and health, and on sustainable healthcare are being included:

Semester	1	2	3	4	5
Activity	2.5 hours Climate change and health	-	15 minutes Negative impacts of pharmaceuticals and pharmaceutical waste on climate	<i>(planned)</i> Antimicrobial resistance	-

Semester	6	7	8	9	10	11	12
Activity	<i>(planned)</i> Environmental impact on pharmacokinetics	-	-	<i>(planned)</i> Communicating health promotion and health benefits	-	<i>(planned)</i> Sustainable healthcare	-

Planetary Health in the new curriculum: Some suggestions for the 6-year program

- **longitudinal** integration of planetary health across the entire medical program
- integrate sustainable healthcare systematically in **existing courses**
 - ex 1, **physiology**:
discuss heat waves and biological adaptation,
altered pharmacokinetics of drugs,
vulnerable populations,
public health adaptation strategies



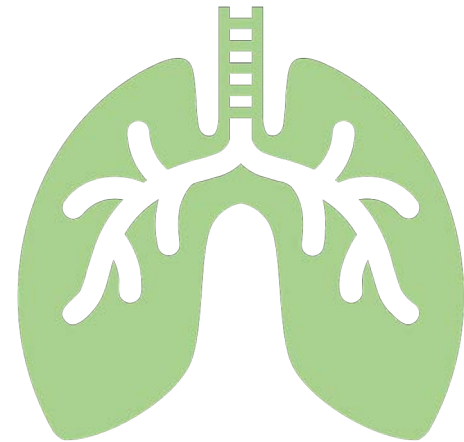
Planetary Health in the new curriculum: Some suggestions for the 6-year program

- **longitudinal** integration of planetary health across the entire medical program
- integrate sustainable healthcare systematically in **existing courses**
 - ex 2, **medical ethics**:
discuss role of health professionals,
communication with patients,
advocacy for health-oriented climate policy,
implications of health care's carbon footprint



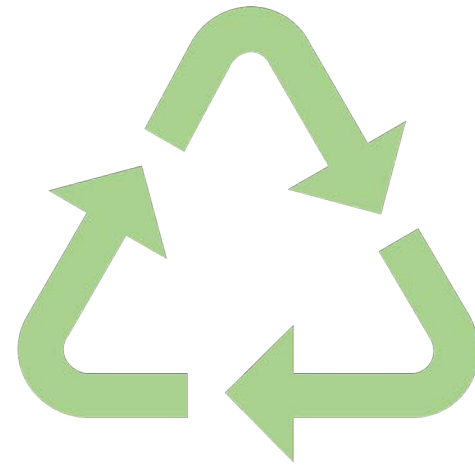
Planetary Health in the new curriculum: Some suggestions for the 6-year program

- **longitudinal** integration of planetary health across the entire medical program
- integrate sustainable healthcare systematically in **existing courses**
 - ex 3, **pulmonology**:
integrate air pollution,
public health mitigation strategies,
metered dose inhalers



Planetary Health in the new curriculum: Some suggestions for the 6-year program

- **longitudinal** integration of planetary health across the entire medical program
- integrate sustainable healthcare systematically in **existing courses**
 - ex 4, **surgery**:
discuss medical waste in the operating room,
waste reduction strategies,
phasing out single-use plastics,
circular economy in health care,
anaesthetic gases





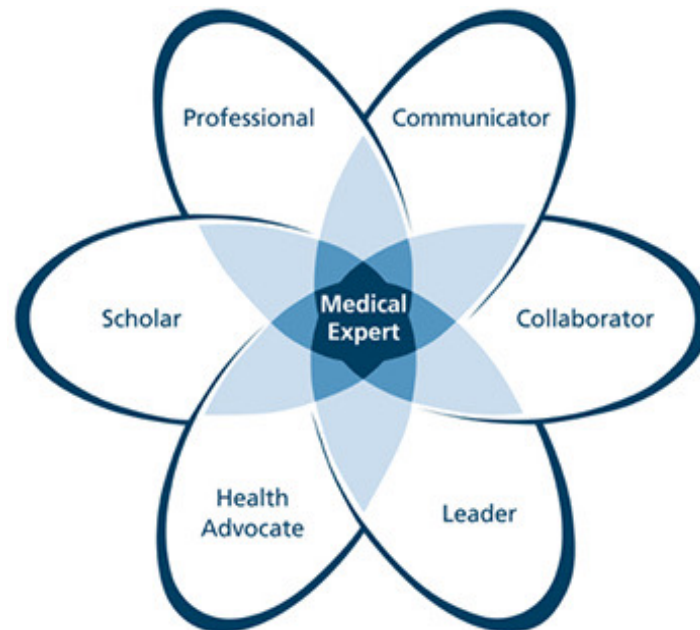
Takeaway messages – PHRC KI 2023

- KI offers many activities including education related to planetary health, however they are scattered and optional
- KI needs to bridge the implementation gap
- KI could become a leader in planetary health

Karolinska Institutet — spearheading planetary health education?

Empower today's students to lead tomorrow's change by providing them:

- **values** for healthy humans on a healthy planet
- **confidence** to advocate for well-being of current and future generations
- **transformative skills** to lead change towards climate-resilient health care systems



CanMeds Roles for health
professionals, proposed 2005:

<https://www.royalcollege.ca/cta/en/canmeds/canmeds-framework.html>



Planetary Health Report Card

2023 Results for Karolinska Institutet

Kontakt: nikolaus.mezger@stud.ki.se



Open letter on education to KI leaders

<https://docs.google.com/spreadsheets/d/1cgZJKLlrJ-SHFbzVvzESX9gRrMPfWhEzHpDjfrtAcPA/edit>



2023 PHRC results for KI

https://phreportcard.org/wp-content/uploads/2023/08/Karolinska-Institutet_2023_MED.pdf

Appendix



- KI is home to academic researchers with a primary focus on planetary health such as IMM, GPH, CESH, CHC
- KI has hosted conferences with a focus on sustainability in health care, awarded grants to planetary health researchers
- The departments of medicine in Huddinge and Solna barely have a planetary health or sustainable healthcare focus (exception: nephrology department)

Recommendations

- Include a sustainability section in research proposals
- All departments should consider planetary health aspects in their research
- Include planetary health aspects to existing KI prizes, grants and conferences



- The medical school has not organised events primarily for the public, nor cooperated with community organisations
- KI dedicates some space to planetary health in its internal communications
- KI intends to include climate and health issues in all its major cooperations including the region of Stockholm, community projects and health care by 2024

Recommendations

- Collaborate with public organisations to disseminate research findings
- Advocate for the implementation of research-based policies



- KI supports student-led sustainability initiatives with infrastructure, online presence and faculty support
- Students advise KI on work related to planetary health and sustainability
- No KI funding is available
- The department of medicine does not actively support student-led initiatives

Recommendations:

- The medical department should actively support student-led initiatives, with a focus on co-creative activities
- KI should fund student-led initiatives



- KI intends to lower its carbon footprint by 50% from 2019 until 2030
- There is no net-zero target
- It is likely KI invests in fossil fuels^{1,2}
- There are staff members employed to lead sustainability efforts
- KI has optional recommendations to make daily operations more sustainable

Recommendations

- KI should investigate its monetary flows and divest from fossil fuels
- KI should make sustainability recommendations for daily operations mandatory

1: <https://fossilfrittsverige.se/aktorer/>

2: <https://medarbetare.ki.se/ki-stiftelser-fonders-utlysninglista>

Resources

EDUCATION FOR SUSTAINABLE HEALTHCARE



A curriculum for the UK

https://www.medschools.ac.uk/media/2949/education-for-sustainable-healthcare_a-curriculum-for-the-uk_20220506.pdf

Resources

Articles

Faculty development and partnership with students to integrate sustainable healthcare into health professions education

SanYuMay Tun , Caroline Wellbery  & Arianne Teherani 

Pages 1112-1118 | Published online: 07 Aug 2020

<https://www.tandfonline.com/doi/full/10.1080/0142159X.2020.1796950?src=recsys>

Consensus Statement

AMEE Consensus Statement: Planetary health and education for sustainable healthcare

Emily Shaw, Sarah Walpole , Michelle McLean , Carmen Alvarez-Nieto , Stefi Barna, Kate Bazin, ...show all

Pages 272-286 | Published online: 19 Feb 2021

<https://www.tandfonline.com/doi/abs/10.1080/0142159X.2020.1860207?journalCode=imte20>

> [Front Public Health](#). 2023 Feb 16;10:1093720. doi: 10.3389/fpubh.2022.1093720. eCollection 2022.

National Planetary Health learning objectives for Germany: A steppingstone for medical education to promote transformative change

Katharina Wabnitz ^{1 2}, Eva-Maria Schwienhorst-Stich ^{3 4}, Franziska Asbeck ³, Cara Sophie Fellmann ³, Sophie Gepp ^{2 5 6}, Jana Leberl ⁷, Nikolaus Christian Simon Mezger ^{2 8 9}, Michael Eichinger ^{10 11}

<https://pubmed.ncbi.nlm.nih.gov/36937826/>

Articles

Envisioning planetary health in every medical curriculum: An international medical student organization's perspective

Omnia El Omrani , Alaa Dafallah , Blanca Paniello Castillo , Bianca Quintella Ribeiro Corrêa Amaro , Sanjana Taneja , Marouane Amzil , ...show all

Pages 1107-1111 | Published online: 06 Aug 2020

<https://www.tandfonline.com/doi/full/10.1080/0142159X.2020.1796949?src=recsys>

PHRC Presentation of results: Council for Environment and Sustainable Development



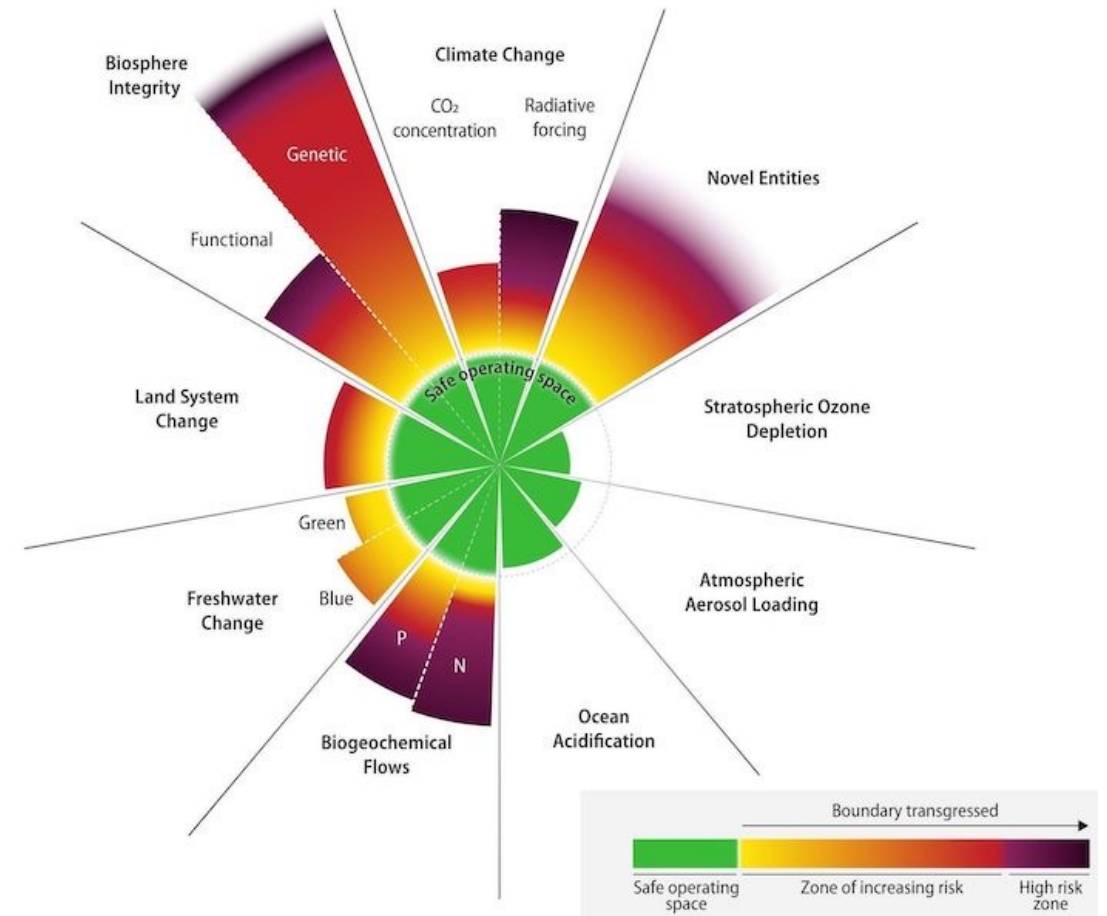
8th September 2023

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Why are we here?

Earth 'well outside safe operating space for humanity', scientists find

First complete 'scientific health check' shows most global systems beyond stable range in which modern civilisation emerged



Why are we here?



<http://www.lancetcountdown.org>

Why are we here?



WHO issues urgent call for global climate action to create resilient and sustainable health systems

<https://www.who.int/teams/environment-climate-change-and-health/climate-change-and-health/country-support/climate-resilient-and-environmentally-sustainable-health-care-facilities>