

MSGH 460 - Planetary Health: Health in the Anthropocene

Instructor Contact Information



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Biography

Dr. Faerron is currently an Associate Professor of Global Health at the University of Maryland Baltimore, Graduate School. He is also the Director of the Centro Interamericano para la Salud Global (CISG) in Costa Rica and acts as the Associate Director of the Planetary Health Alliance at the Harvard T.H. Chan School of Public Health, as well as adjunct faculty at the Universidad de Costa Rica, School of Medicine, Harvard School of Dental Medicine, and the Universitat Oberta de Catalunya.

Dr. Faerron began his career as a primary care doctor in a rural area of Costa Rica, where he worked closely with migrant and indigenous populations. His work seeks to redefine the meaning of leadership in global health through innovative educational approaches. Dr. Faerron follows a framework of equity in health and human rights as guiding principles and firmly believes in progress in health through community empowerment, action/research, and participatory education.

Course Description

As an emerging scientific field within and beyond global health, planetary health seeks to unravel the interlinkages between environmental health, human health, and the societal aspects on which these two depend. Beyond just a scientific discipline, planetary health is also a movement that seeks to leverage these new understandings to find solutions that integrate the wellbeing of our biosphere. It does so by taking a transdisciplinary and multisectoral approach to understanding the indivisible bidirectional relationship between the environment and wellbeing.

As an introductory level course to planetary health, the course will focus on the major elements of current planetary health research, policy-action, and practice. A central theme of the course will be the use of a social justice and equity lens to the planetary health challenges we are facing and how this lens can inform more comprehensive solutions. Complexity, movement building, governance, and interconnection within Nature and their relation to planetary health will also be critical themes explored during this course.

Course Objectives

By the end of this course, you will be able to:

- Assess the interrelations between human health, anthropogenic variations of the environment, and the social-ecological determinants of health.
- Identify strategies to support horizontal and bottom-up approaches for solutions to planetary health challenges.
- Apply social justice and human rights principles in addressing planetary health issues.
- Implement suitable communication methods to convey the challenges and solutions of planetary health to diverse audiences.
- Assess local and global policy and research gaps in relation to planetary health.

Course Schedule

Module 1- The concept of Planetary Health and the Anthropocene

Overview

The best evidence available alerts us that our global environment is changing at alarming rates. Climate change, biodiversity loss, changing oceans, air, water, and soil pollution, and land-use change are featured daily as threats to our wellbeing. The driving force for these changes is one species: our own. Because of this, we have entered the new geological era of the Anthropocene, characterized by large-scale human impact on Earth's natural systems.

To understand the health impact of these large-scale environmental changes, the concept of planetary health was created in 2015. According to the Planetary Health Alliance, "Planetary health is a solutions-oriented, trans-disciplinary field and social movement focused on analyzing and addressing the impacts of human disruptions to Earth's natural systems on human health and all life on Earth."

Planetary Health requires careful attention to the human systems - political, economic, and social - that shape the future of Earth's natural systems. This introductory module will describe the key tenants of planetary health.

Learning Objectives

By the end of this module, students will be able to:

- List the defining characteristics of the Anthropocene.
- Outline the historical perspectives and milestones that have laid the foundation of planetary health.
- Analyze the concept of planetary health and its distinguishing characteristics in relation to other fields that explore the intersection of the environment and health nexus.
- Relate how anthropogenic changes to natural systems are impacting the global burden of disease.

Readings & Media

Required Readings

- Whitmee S, Haines A, Beyrer C, Boltz F, Capon AG, De Souza Dias BF, et al. 2015. Safeguarding human health in the Anthropocene epoch: Report of the Rockefeller Foundation-Lancet Commission on planetary health. SECTIONS: Executive Summary and Introduction.
- Ciara Raudsepp-Hearne, Garry D. Peterson, Maria Tengö, Elena M. Bennett, Tim Holland, Karina Benessaiah, Graham K. MacDonald, Laura Pfeifer BioScience; Untangling the Environmentalist's Paradox: Why Is Human Well-being Increasing as

Ecosystem Services Degrade?, Volume 60, Issue 8, September 2010, Pages 576–589, <https://doi.org/10.1525/bio.2010.60.8.4>.

- Waters CN et al. The Anthropocene is functionally and stratigraphically distinct from the Holocene. *Science* 2016;351(6269):aad2622. DOI:10.1126/science.aad2622.
- Steffen W. Introducing the Anthropocene. *The Human Epoch. AMBIO* 2021. DOI: 10.1007/s13280-020-01489-4.

Required Media

- Video: [The Anthropocene](#).
- [The Promise of Planetary Health](#).
- CAFG Videos:
 - Introduction to the course and module
 - The environmentalist's paradox
 - The planetary health framework

Optional Readings

- Redvers, N., Celidwen, Y., Schultz, C., Horn, O., Githaiga, C., Vera, M., Perdrisat, M., Plume, L.M., Kobei, D., Kain, M.C. and Poelina, A., 2022. The determinants of planetary health: an Indigenous consensus perspective. *The Lancet Planetary Health*, 6(2), pp.e156-e163.
- Faerron Guzmán, C.A., Aguirre, A.A., Astle, B., Barros, E., Bayles, B., Chimbari, M., El-Abbadi, N., Evert, J., Hackett, F., Howard, C. and Jennings, J., 2021. A framework to guide planetary health education. *The Lancet Planetary Health*, 5(5), pp.e253-e255.
- The Guardian. The Anthropocene epoch: have we entered a new phase of planetary history? [Internet] Nicola Davison Thu 30 May 2019, <https://www.theguardian.com/environment/2019/may/30/anthropocene-epoch-have-we-entered-a-new-phase-of-planetary-history>.

Discussions

1. Discuss how the global health agenda, including the Sustainable Development Goals, is intertwined with the goals of planetary health. Elaborate one example of a global health challenge that could benefit from the addition of a planetary health lens. In the discussion board, briefly explain your answer in a 3-5 minute video or a 500 word (max. description)
2. Comment on one of your peers' posts and suggest how an interdisciplinary approach (using the planetary health framework) could help address the global health challenge in a more holistic manner. Maximum length of 500 words.

Assignments

You will have 2 weeks to complete this assignment.

You have been contacted by an elected official, who has asked that you explain to them the concept of planetary health as they are participating in a forum next week called *The Planetary Health Policy Forum*. As they are short in time, you are given the option to either provide a short written explanation of maximum 600 words or a video of maximum 5 minutes.

The elected official's aid tell you that they are visual learners and your task is to create an original diagram that explains the concept of planetary health and how it relates to the Anthropocene. In addition, you have to write your own simple definition of planetary health and explain each of the components of your definition. Make sure your definition or explanation is addressing/acknowledging the determinants of health framework. The video and the definition must go hand in hand, complementing each other.

Module 2- Global Environmental Change and Health trends

Overview

Planetary health science is precise: if we continue to extract and exploit our natural systems at the rhythm we are doing so, we will threaten the wellbeing of our ecosystems, humans, and societies. This begs the question: is there a safe space for humanity in which we can achieve wellbeing for all while safeguarding our natural systems? Are there limits we should be aware of when it comes to how we relate to our natural systems?

Scientists worldwide have tackled this question and have created models to put a "ceiling" on safe boundaries within which humans and ecosystems are allowed to thrive in conjunction. Pioneered by the Stockholm resilience center, the idea of planetary boundaries can help us drive actions to reverse the emerging health threats we are facing. In this module, we will explore the idea of the planetary boundaries framework (and associated frameworks) and expand our understanding of how human activities are threatening the wellbeing of our planet (including ourselves).

Learning Objectives

By the end of this module, students will be able to:

- Describe global trends in Earth's natural systems and the health effects of global environmental change.
- Debate the planetary boundaries approach to understanding environmental issues.
- Identify the health risks associated with global environmental change.
- Explain the mechanisms of how anthropogenic changes to natural systems are shifting the global burden of disease.

Readings & Media

Required Readings

- Whitmee S, Haines A, Beyrer C, Boltz F, Capon AG, De Souza Dias BF, et al. 2015. Safeguarding human health in the Anthropocene epoch: Report of the Rockefeller Foundation-Lancet Commission on planetary health. SECTIONS: -How are the Earth's global systems changing?; - Population growth, consumption, and technology—drivers of environmental change; and -Key health effects of environmental change
- Steffen W et al. Sustainability. Planetary boundaries: guiding human development on a changing planet. *Science* 2015;347(6223):1259855. DOI:10.1126/science.1259855.
- Folke C et al. Our future in the Anthropocene biosphere. *Ambio* 2021 Apr;50(4):834-869. DOI: 10.1007/s13280-021-01544-8. Orientación: leer el artículo con detalle. Retener los 5 ejes principales en el que se articula.

Required Media

- **CAFG Videos:**
 - Stories from graphs
 - Case study: Pathways to understanding the connection of climate change and health
 - Explanation of assignment
- World Economic Forum. [Beyond the Anthropocene](#), Johan Rockström.

Optional readings

- Hickel, J., 2020. *Less is more: How degrowth will save the world*. Random House. Section 2 – The Rise of the Juggernaut.

Optional media

- Rockström, J. and Gaffney, O., 2021. *Breaking boundaries: The science of our planet*. Dorling Kindersley Ltd.
- Explore the Visualisation Centre of the Material Flows initiative <http://www.materialflows.net/visualisation-centre/>

Discussions

Is there a way to achieve human wellbeing for all (meaning everyone on Earth and including future generations) while not overshooting our Earth's carrying capacity? Post a reflection on what you think about this question and elaborate on some key tenets we should consider if your answer was yes. If your answer was no, elaborate on the reasons why you think so. Max 400 words.

Assignments

Policy Brief Part 1 (Draft introduction and diagram)

Choose a planetary health challenge of your interest and choose the primary audience for your policy brief. You may want to discuss with the faculty before choosing your topic. The topic you choose for this assignment will be the same one you will develop for your following assignments.

Start familiarizing yourself with the resource [A Student's Guide to Writing a Global Health Policy Brief](#). Global Health Education and Learning Incubator at Harvard University 2019.

Draft a 750 word introduction to your policy brief. The introduction should contextualize the challenge. Make sure you include burden of disease metrics (and other epidemiological data) and that you are using comparative data of the planetary health challenge you chose, as well as analyzing future trends in relation to the context of your challenge.

As part of the introduction, create a diagram that explains how the different changes of environmental systems are impacting this health challenge. The diagram should include feedback loops and root cause mechanisms driving the changes in environmental systems and clear directionality on how these affect health outcomes in humans. For this diagram you have to analyze the challenge using a determinants of health framework. You may choose to use any type of diagram you see fit (e.g., spider map, process map, tree map, spaghetti diagram). The diagram should be self-explanatory but you can also explain your diagram in a 3 to 5 minute video or a 500 to 700 word document.

Module 3- The policy environment - planetary health governance

Overview

Health and environmental-related decisions within a nation-state are increasingly affected by the global political, economic, and environmental decisions taken at other latitudes. By first having worked on a simple definition of governance, this unit will examine the role of domestic and international laws, treaties, covenants, and others in promoting planetary health and the roles and responsibilities of national and international actors in planetary health. A special look at the significant actors and forces in the decision-making process will reveal some of the complexities of the planetary health governance field.

Learning Objectives

By the end of this module, students will be able to:

- Analyze the existing correlations between distinct development and environmental policies and programs and health of populations.
- Explain the connections between planetary health, sustainability, and the Sustainable Development Goals
- Assess the socio-cultural and political context, including historical perspectives and current governance structures that influence planetary health-related processes.
- Evaluate the purpose and effectiveness of policies in the context of planetary health and their interaction with a diverse set of actors and stakeholders.

Readings & Media

Required Readings

- Willetts, L. and Grant, L., 2022. The health–environment nexus: global negotiations at a crossroads. *The Lancet*, 399(10336), pp.1677-1678.
- Willetts, E., Grant, L., Bansard, J., Kohler, P. M., Rosen, T., Bettelli, P., & Schröder, M. (2022). [Health in the global environmental agenda: A policy guide](#). International Institute for Sustainable Development.

- Independent Group of Scientists appointed by the Secretary-General, Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development, (United Nations, New York, 2019).<https://sustainabledevelopment.un.org/globalsdreport/2019>

Required Media

- Video: [The Future is Now: Science for Achieving Sustainable Development](#).
- CAFG Videos:
 - Introduction to the course and module
 - What is Governance?
 - How are development and environmental policies interrelated with health outcomes?

Discussions

Once you have chosen a topic for your policy brief, share with the class why this topic excites you. Justify your decision and why you think it is especially relevant to you and your work.

Read your peer's posts on the topic they have chosen and comment on one of them, recommending to them resources (books, journal articles, videos, etc.) that they might need to be aware of as they work on their policy brief.

Assignments

Policy Brief Part 2 (Actors and governance of planetary health challenge)

Create a stakeholder map with the actors that are relevant to the planetary health challenge. You may choose to use any type of diagram you see fit (e.g., spider map, process map, tree map, spaghetti diagram). Place the stakeholders in an "interest vs power" matrix and explain your choices in regard to where you have placed them in the interest vs power matrix.

Module 4 - Health Inequities in the Anthropocene

Overview

The health impacts of our changing planet are unjustly distributed throughout the world. Different populations, geographies, and generations are feeling and will feel different magnitudes of health impacts. Thus, the significant ongoing change in environmental dynamics must be analyzed with particular attention to the increasing disparities amongst vulnerable populations. This module will emphasize different aspects of anthropogenic changes to natural systems, such as climate change and change in land use – that impact health in unjust ways. Connections to prior units relating to basic planetary health concepts will be reinforced.

Learning Objectives

By the end of this module, students will be able to:

- Interpret burden of disease measures of different populations in relation to planetary health challenges
- Apply human rights, environmental justice, and determinants of health frameworks to health inequities in relation to planetary health challenges
- Assess distinct communication strategies to communicate health inequities to distinct audiences

Readings & Media

Required Readings

- Engelman, R., Bongaarts J., and Patterson, K.P. (2020). Population, Consumption, Equity and Rights. In S. Myers & H. Frumkin (Eds.). *Planetary health: protecting Nature to protect ourselves*. Island Press.
 - This introductory level reading provides an overview of how planetary health is linked to current conversations of equity and human rights and further explores current debates around population growth and consumption as underlying issues of planetary health challenges.
- Prescott, S. L., Logan, A. C., Albrecht, G., Campbell, D. E., Crane, J., Cunsolo, A., ... & Wegienka, G. (2018). [The Canmore declaration: statement of principles for planetary health](#). *Challenges*, 9(2), 31. Link [HERE](#).
 - An overview of how different worldviews frame what the future of our planet looks like.
- Levy, B. S., & Patz, J. A. (2015). Climate change, human rights, and social justice. *Annals of global health*, 81(3), 310-322.
 - This reading provides an example of how climate change is linked to social justice and lays out current and future disparities of health impacts in relation to climate change.

Required Media

- CAFG Videos:
 - Introduction to the module and understanding the concept of equity
 - A framework to explain inaction in the face of environmental change
 - A case study – Palm Oil and Planetary Health
- Robinson, M. (2018). [Why climate change is a threat to human rights](#).
 - A TedTalk by Mary Robinson explaining how climate change is a quintessential human rights issue.

Optional resources

- Landrigan, P. J., Fuller, R., Acosta, N. J., Adeyi, O., Arnold, R., Baldé, A. B., ... & Zhong, M. (2018). [The Lancet Commission on pollution and health](#). *The lancet*, 391(10119), 462-512.
 - A seminal reading on how pollution affects people's health in different parts of the world and how it impacts our social and economic systems.
- Evison, W., & Bickersteth, S. (2020). A new economics for Planetary Health. (Chapter 15). In S. Myers & H. Frumkin (Eds.). *Planetary health: protecting Nature to protect ourselves*. Island Press.
 - An overview of our current economic system and how it impacts the environment, as well as a new vision for an economic system that protects people and planet.
- Foster, A., Cole, J., Farlow, A., & Petrikova, I. (2019). Planetary health ethics: beyond first principles. *Challenges*, 10(1), 14.
 - A perspective by planetary health thought leaders on the need for a clear ethical framework to guide planetary health.

Discussions

1. Choose an environmental justice issue of interest that has been portrayed both by the media and the scientific community (in the form of an academic publication). It cannot be the same challenge you have selected for your policy brief. You may choose issues such as deforestation/land use change, water/air/soil pollution, climate change, loss of biodiversity, among others. In the discussion board, post the resources you found (2 or 3) and briefly explain in a 3 to 5 minute video or a 500 word (max. description) the topic to your peers.
2. Comment on one of your peers' posts and answer:
 - a. Why is the topic chosen by your peer an environmental justice issue?
 - b. How is the topic portrayed in the media and in the scientific community? Compare and contrast.

Assignments

Policy Brief Part 3 (an equity analysis of the planetary health challenge)

Analyze your challenge from a perspective of equity. Support your claims with data points and advocate for the populations you deem should be prioritized. Write up your analysis in an 800 word document.

Module 5 - Economic models and planetary health

Overview

Despite all the progress that it has brought in the last two centuries, our current and predominant economic system is now threatening the future of our societies. Economic growth

has translated to lifting billions out of poverty, building vital infrastructure to keep us healthy, and the growth in the reach of basic rights worldwide. But it is also irreversibly damaging our natural systems and also exacerbating inequities.

Gross accumulation of capital and growing disparities and injustices mean we need to reimagine our economic systems. This module is an overview of our current economic models and how they are related to the planet's wellbeing (including our own) and some economic routes societies may be able to take in the future.

Learning Objectives

By the end of this module, students will be able to:

- Correlate how global economic models influence the health of humans and the planet.
- Understand dominant historic economic trajectories and their relationship with the state of Earth's natural systems.
- Explain alternative economic models and their pros and cons in the face of global environmental challenges.

Readings & Media

Required Readings

- Brand-Correa, L., Brook, A., Büchs, M., Meier, P., Naik, Y. and O'Neill, D.W., 2022. Economics for people and planet—moving beyond the neoclassical paradigm. *The Lancet Planetary Health*, 6(4), pp.e371-e379.
- Evison, W., & Bickersteth, S. (2020). A new economics for Planetary Health. (Chapter 15). In S. Myers & H. Frumkin (Eds.). *Planetary health: protecting Nature to protect ourselves*. Island Press.
- Gill, S.R. and Benatar, S.R., 2020. Reflections on the political economy of planetary health. *Review of International Political Economy*, 27(1), pp.167-190.
- de León, E.A., Shriwise, A., Tomson, G., Morton, S., Lemos, D.S., Menne, B. and Dooris, M., 2021. Beyond building back better: imagining a future for human and planetary health. *The Lancet Planetary Health*, 5(11), pp.e827-e839.
- Raworth, K., 2017. *Doughnut economics: seven ways to think like a 21st-century economist*. Chelsea Green Publishing. (Define 1 or 2 chapters)
- Hickel, J., 2020. *Less is more: How degrowth will save the world*. Random House. (Chapter 2 – The rise of the juggernaut)

Required Media

- [A healthy economy should be designed to thrive, not grow](#) | Kate Raworth
- CAFG Videos

- Introduction to the course and module
- Overview of consumption trends and the dominant economic system

Optional Media and Readings

- Wellbeing economies: a new economic approach for human and planetary health - <https://eeb.org/wellbeing-economies-a-new-economic-approach-for-human-and-planetary-health-2-june-stockholm/> (not available yet)
- Mair, S., 2020. Neoliberal economics, planetary health, and the COVID-19 pandemic: a Marxist ecofeminist analysis. *The Lancet Planetary Health*, 4(12), pp.e588-e596.
- Fan, S., Headey, D., Rue, C. and Thomas, T., 2021. Food Systems for Human and Planetary Health: Economic Perspectives and Challenges. *Annual Review of Resource Economics*, 13, pp.131-156.
- Sula-Raxhimi, E., Butzbach, C. and Brousselle, A., 2019. Planetary health: countering commercial and corporate power. *The Lancet Planetary Health*, 3(1), pp.e12-e13.

Discussions

(Optional) How are economic systems linked to political worldviews, and how do they relate to our relationship with the environment? How would you summarize the dominant narratives in the world relating to the political spectrum and the way we relate to the environment?

Assignments

Policy brief 4 – drafting recommendations and solutions.

Start drafting recommendations and solutions that you plan to pitch as part of your policy brief. Make sure they are addressing comprehensively the topic and are not looking for silver bullet solutions. These recommendations should incorporate the analysis you have provided in previous sections of the policy brief. Justify your selection of recommendations and submit your draft recommendations in an 800 word document.

Module 6 – Food systems in the Anthropocene

Overview

Population growth, accelerated urbanization, dietary transition, economic dynamics, globalization and climate change have transformed the global food system. This has resulted in increased use of resources, biodiversity loss, ecosystem degradation, water scarcity and compromised food security. The current global agricultural system is producing enough food to feed the planet, but access to and consumption of sufficient food that is culturally acceptable, affordable, environmentally conscious and nutritious is more challenging. The broad health implications and fragile long-term sustainability make a compelling case for reexamining food in a systematic way and focus on an integrated approach addressing sustainable production,

sustainable diets, food waste, and efficient supply chains. This module examines the concept of food security in all its dimensions emphasizing nutrition and the links between food production, food consumption, and environmental health.

Learning Objectives

- Correlate the impacts of current food systems on Earth's natural systems and human health.
- Analyze food systems in terms of their interlinked components, including food production, dietary patterns, nutritional outcomes, and environmental health.
- Explore the connections between personal food choices, food systems, health outcomes, and environmental impacts.

Readings & Media

Required Readings

- Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A. and Jonell, M., 2019. Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet*, 393(10170), pp.447-492.
- Myers, S. (2020). Food and Nutrition in a Rapidly Changing Planet. (Chapter 5). In S. Myers & H. Frumkin (Eds.). *Planetary health: protecting Nature to protect ourselves*. Island Press.

Required Media

- Guest Lecture (TBD)
- Eat For The Planet Podcast: E1: The Planetary Health Diet - <https://eatforum.org/learn-and-discover/e1-the-planetary-health-diet/>

Optional Resources

- Godfray, H. C. J., Beddington, J. R., Crute, I. R., Haddad, L., Lawrence, D., Muir, J. F., & Toulmin, C. (2010). Food security: the challenge of feeding 9 billion people. *science*, 327(5967), 812-818.
- Food and Agriculture Organization of the United Nations. *Transforming Food and Agriculture to Achieve the SDGs*. Rome; 2018. Available from: <http://www.fao.org/3/i9900en/i9900EN.pdf>
- Myers SS, Smith MR, Guth S, Golden CD, Vaitla B, Mueller ND, et al. Climate Change and Global Food Systems: Potential Impacts on Food Security and Undernutrition. *Annu Rev Public Health*. 2017 Mar 20;38(1):259–77.
- Meybeck A, Gitz V. Sustainable diets within sustainable food systems. *Proc Nutr Soc*. 2017;76(01):1–11.

- Canavan CR, Noor RA, Golden CD, Juma C, Fawzi W. Sustainable food systems for optimal planetary health. *Trans R Soc Trop Med Hyg* [Internet]. 2017 Jun 1;111(6):238–40.
- Ostfeld, Richard S. Biodiversity loss and the ecology of infectious disease. *The Lancet Planetary Health* 1.1 (2017): e2-e3.
- WEBINAR | [Food Systems, Sustainability and Health](#)
- [The Diet of the Future - EAT-Lancet UN Launch](#)

Case Study Assignment 1 (Discussion Format)

Read the following case study: Duff H., Faerron Guzmán, C., Almada, A., Golden, C., and Myers, S. "Today's Solutions for the Future of Food." *Planetary Health Case Studies: An Anthology of Solutions*. 2020; https://doi.org/10.5822/phanth9678_7

Make sure you are clicking on the additional resources in the side bars. Once you have done so, reflect on your diet. Maybe write down a broad weeklong menu of what you have eaten (you are not obliged to share this). Where do you get your food from? Are you aware of its origin? How do you make food choices? Is there anything you would like to change?

Post your reflection (while clearly tracking back to the case study and its resources) in a maximum of 800 words.

Module 7 – Movement Building for systems change

Overview

Movement building holds an immense potential to change policy frameworks and rewrite narratives for a positive future. In light of the "doom and gloom" and hopelessness that dominates our global environmental challenges, *movement building* stands up as a promising alternative to enact changes for a better now and a better future.

This module will focus on the role of *movement building* and *narratives* in changing local and global systems. Through foundational conceptual readings, we will understand how large-scale change comes to be and how we can face our current environmental challenges without falling into despair.

Learning Objectives

By the end of this module, students will be able to:

- Understand key elements and tenants in building successful movements for systems change.
- Appreciate the role of movement-building in the face of planetary health challenges.
- Identify distinct context-specific strategies to strengthen movement building.

Readings & Media

Required Readings

- Ganz, M., 2010. Leading change: Leadership, organization, and social movements. *Handbook of leadership theory and practice*, 19, pp.1-10.
- Frumkin, H., 2022. Hope, Health, and the Climate Crisis. *The Journal of Climate Change and Health*, p.100115.
- Howard, C. (2020). c. The Lancet: Planetary Health, 4(9), [https://doi.org/10.1016/S2542-5196\(20\)30200-X](https://doi.org/10.1016/S2542-5196(20)30200-X)

Required Media

- [Marshall Ganz on Fighting for Social Change](#)
- CAFG Videos
 - The arch of change – how does change actually happen?

Optional Resources

- UNICEF, 2020. Minimum Standards and Indicators for Community Engagement. New York, UNICEF.
- Kania, J. and Kramer, M., 2011. Collective impact. Stanford Social Innovation Review. Winter 2011. Palo Alto, CA.
- Wolff, T., 2016. Ten places where collective impact gets it wrong. *Global Journal of Community Psychology Practice*, 7(1), pp.1-13.

Case Study Assignment 2 (Discussion Format)

Read the following case study: Duff H., Faerron Guzmán, C., Almada, A., Golden, C., and Myers, S. "Coastal Conservation takes Root: Education and Economic Agency as a Way to Protect Sri Lanka's Mangroves." *Planetary Health Case Studies: An Anthology of Solutions*. 2020; https://doi.org/10.5822/phanth9678_9

Describe in a 500-word post what elements of movement building and community inclusion made this program successful? In addition, propose 2-3 strategies that you would have done differently? Finally, are there any lessons you could translate into another context you are familiar with or currently working on?

After posting your assignment, respond to one of your peer's observations. Make sure you are adding to their perspectives.

Module 8 - Reconnecting with Nature

Overview

Despite an overwhelming body of evidence that connects our wellbeing as interdependent with the biosphere, our societal/individual perspectives and attitudes have not yet fully considered this. Many of us continue to view ourselves as independent from and not dependent within Nature. This false dichotomy (humans and Nature) perpetuates a culture of domination over Nature - a root cause of many of our environmental crises.

Understanding the role of humans within Nature as societies and as individuals has become a foundational issue to Planetary Health science and practice. Nonetheless, this understanding rarely is taken into consideration in university curricula. This module is an approach to close that gap and consider how to reimagine our relationship within Nature.

Learning Objectives

By the end of this module, students will be able to:

- Explain the reasons behind our current trends to disconnect from Nature.
- Understand interconnectedness within Nature as a key determinant of health.
- Appreciate interconnectedness within Nature as a core value in designing solutions for planetary health challenges.
- Reflect on one's connection with Nature and the reasons for this relationship.

Readings & Media

Required Readings

- Education for Planetary Health: A call for transformative, inclusive, and integrative approaches to (re)learning (upcoming Fall 23)
- Zylstra, M.J., Knight, A.T., Esler, K.J. and Le Grange, L.L., 2014. Connectedness as a core conservation concern: An interdisciplinary review of theory and a call for practice. *Springer Science Reviews*, 2(1), pp.119-143.
- Hickel, J., 2020. *Less is more: How degrowth will save the world*. Random House. Chapter 1 - Capitalism: A Creation Story
- Redvers, N., Celidwen, Y., Schultz, C., Horn, O., Githaiga, C., Vera, M., Perdrisat, M., Plume, L.M., Kobei, D., Kain, M.C. and Poelina, A., 2022. The determinants of planetary health: an Indigenous consensus perspective. *The Lancet Planetary Health*, 6(2), pp.e156-e163.
- Duff H., Faerron Guzmán, C., Almada, A., Golden, C., and Myers, S. "The Interconnectedness of People and Planet: Learning from Māori Worldviews." *Planetary*

Health Case Studies: An Anthology of Solutions. 2020;
https://doi.org/10.5822/phanth9678_10"

Required Media

- [Reclaiming the Honorable Harvest](#): Robin Kimmerer at TEDxSitka
- CAFG videos
 - Module introduction
 - Case Study Discussion

Optional Resources

- My Octopus Teacher – Netflix
- [The Thousand Names of Gaia](#)
- Kimmerer, R., 2013. *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Milkweed editions.

Case Study Assignment 3 (Essay Format)

For this module's assignment, and after reading the case study ["The Interconnectedness of People and Planet: Learning from Māori Worldviews"] you will have to reflect on your own relationship with Nature. This will require you to take a moment to stop what you are doing and identify elements of your daily life and how they relate to your natural environment. You will focus on memories, vacations, your food, where it comes from, the technology you use, elements of your spirituality, movies/documentaries you have watched, and books you have read, among many other experiences. If possible, I suggest you take a moment to do this reflection in a place "surrounded by Nature" and where technological distractions are minimal.

For the deliverable of this module, you may choose anything from a poem, a drawing, a song, an essay; whichever you decide to choose, you will have to answer these questions in a 800-word essay.

- How does your worldview/your experiences influence your relationship with Nature?
- What elements of your daily life bring you closer or farther from Nature?
- What actions can you take to improve your relationship with Nature?

Module 9 – Complexity and Planetary Health

Overview

To thrive in today's increasingly interconnected world, the ability to characterize, manage, and solve complex challenges has never been more essential. Systems thinking provides theoretical

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How will the students access this case study?

and practical approaches to seek solutions to these technical, social, and environmental complex challenges at local, regional, and global levels. In essence, systems thinking attempts to align better how we think with how the world works.

This module examines the interlinkages within systems that relate to planetary health—including human, political, community, resource, environmental, and social processes—to get a comprehensive view of how organizations and individuals often look at the world and assess challenges and develop and implement solutions.

Learning Objectives

By the end of this module, students will be able to:

- Understand the basic tenants of complexity and systems thinking in relation to planetary health challenges and solutions.
- Apply systems thinking to various planetary health issues.
- Appraise interrelated and complex relationships between development, politics, the environment, and the socio-cultural context.
- Build visual maps to enhance the understanding of complex challenges and the ability to enact real solutions.

Readings & Media

Required Readings

- Faerron Guzman, CAF (2022). Complexity as a central tenet of global health practice and education – bridging the theory to practice gap in global health. (In press)
- Dan Heath, [Upstream, Chapter 1 "Moving Upstream", Avid Reader Press, 2020, pp. 1-17](#)
- Donella Meadows, Thinking In Systems, Chelsea Green Publishing, 2009, pp 11-34, Chapter 1 "The Basics"
- Iyer, H.S., DeVille, N.V., Stoddard, O., Cole, J., Myers, S.S., Li, H., Elliott, E.G., Jimenez, M.P., James, P. and Golden, C.D., 2021. Sustaining planetary health through systems thinking: Public health's critical role. *SSM-Population Health*, 15, p.100844.

Required Media

- CAFG Videos
 - Introduction to assignment and module.
 - Health as a complex concept
 - Revisiting planetary health challenges from a complex lens

Optional Resources

- [Episode 2 from the Food by Design podcast.](#)

Case Study Assignment 4 (Essay or Video Format)

You will choose one of the following case studies from - Duff H., Faerron Guzmán, C., Almada, A., Golden, C., and Myers, S. "Planetary Health Case Studies: An Anthology of Solutions" 2020; <https://doi.org/10.5822/phanth9678>:

- Health and Haze
- Dams and Disease
- Going Circular
- Putting Foods Needs First
- Typhoid and Torrents
- Family Planning for People and Planet

After reading the case study, your task is to create a diagram (e.g., process map, spider map, flow chart, etc.) explaining the connections between the ecological and social determinants of health and the detrimental health outcome prior to the intervention. Make sure you include stakeholders in your graphic. You will then create a 500 word or 5-minute video explaining your graphic and how the intervention highlighted in the case study works towards shifting the system towards health improvement of people and planet.

Policy Brief 5 - Final draft of the Policy Brief

If you desire to get feedback on your final policy brief, this will be an opportunity to get a formative revision of your policy brief from one of your peers.

Module 10 – Wrap up - The role of Health Professionals in achieving Planetary Health

Overview

Whether you decide to take a professional path as a researcher, educator, clinician, activist, community health worker, or other, planetary health has space for and needs the participation of everyone. As future health professionals, we must strive to practice our profession in a more environmentally sustainable way and care and take action to protect the environment for future generations. Convergent action that reinforces our common goals is imperative if we are to solve our common challenges. In this final module, you will reflect on your role in solving planetary health challenges.

Learning Objectives

By the end of this module, students will be able to:

- Assess one's role in the future of planetary health.
- Develop a sense of responsibility to self, community, society, and broadly planetary health.
- Acknowledge one's limitations in skills, knowledge, and abilities.
- Identify local and global policy, action, and research gaps in relation to planetary health.

Readings & Media

Required Readings

- Wabnitz, K. and Faerron Guzman, C.A. 2022. Why We Need Planetary Stewards: The role of liberal education in preparing students to protect the Earth. Diversity and Democracy (in press)

Optional Readings

- Behera, M.R., Behera, D. and Satpathy, S.K., 2020. Planetary health and the role of community health workers. *Journal of Family Medicine and Primary Care*, 9(7), p.3183.
- Shaw, E., Walpole, S., McLean, M., Alvarez-Nieto, C., Barna, S., Bazin, K., Behrens, G., Chase, H., Duane, B., El Omrani, O. and Elf, M., 2021. AMEE consensus statement: planetary health and education for sustainable healthcare. *Medical teacher*, 43(3), pp.272-286.
- Kurth, A.E., 2017. Planetary health and the role of nursing: A call to action. *Journal of Nursing Scholarship*, 49(6), pp.598-605.
- Ebi, K.L., Harris, F., Sioen, G.B., Wannous, C., Anyamba, A., Bi, P., Boeckmann, M., Bowen, K., Cissé, G., Dasgupta, P. and Dida, G.O., 2020. Transdisciplinary research priorities for human and planetary health in the context of the 2030 agenda for sustainable development. *International journal of environmental research and public health*, 17(23), p.8890.

Required Media

- CAFG Video
 - Final Reflections

Discussion

The Role of Health Professionals Planetary Health Commentary

You have been invited to write a 800-word commentary for a scientific journal on " **The Role of Health Professionals in Planetary Health**". You are asked to reflect on current and future challenges of the field and incorporate current trends and discourses surrounding planetary health. In this commentary, you may choose to focus on a single issue within planetary health or write from the perspective of a specific discipline. Consider one or several of these questions

to write the commentary: What is your role in planetary health? What do you wish to accomplish? How can sectors including yours collaborate better? What do future planetary health practitioners look like? What can they do? What are their tools? How do they think?

Post your commentary in the discussion board. Once you have done so, please read one of your peer's commentary and add to their perspectives. Where are there areas of coincidence with what you wrote? What did they miss? What are areas in which you could collaborate?

Final and Complete Policy Brief (The Final Project)

Complete the policy brief on your challenge and make a case for why it needs to be a priority and how to move forward. Use current evidence to support your suggestions.

Policy briefs usually include the following sections:

- Title
- Executive Summary
- Context or Scope of Problem
- Policy Alternatives
- Policy Recommendations
- Appendices
- Consulted or Recommended Sources

Resources for Policy brief:

1. [A Student's Guide to Writing a Global Health Policy Brief](#)
2. [Gap Minder](#)
3. Institute for Health Metrics and Evaluation. (2016). [Data visualizations](#).
4. The Lancet. [Global burden of disease](#).

Important Note about the Final Policy Brief (Final Project) Document

It is expected that you will turn in a final project that has been finessed and fine tuned as a complete paper. Rather than merely copying and pasting from your previous iterations of the various sections, we want you to review your previous work and make changes and improvements as needed. In addition, you should connect the various sections appropriately so the document reads as one flowing and persuasive narrative.

Assignment Overview and Grading Breakdown

The course assessment strategy includes the following assignment categories: is built around a scaffolded policy brief project that has deliverables throughout the course and culminates in a

The grading turnaround will be one week from the due date. You will be notified if the turnaround will be longer than one week. The Final Project will be graded within two weeks.

- **The following are the Graded Assignments for the course:**
- **1 x pre-course survey that is 6 points and equal to 5% of the course grade**
- **6 x weekly discussions that are 20 points each and equal to 15% of the final course grade**
- **5 Case Study Assignment discussions that are 100 points each and equal to 30% of the course grade**
- **4 x Policy Brief Group Assignments (pairs) that are 100 points each and worth 20% of the grade**
- **1 x Final Project (Policy Brief Completed) that is 100 points and worth 30% of the grade**

A Description of the Policy Briefs and Final Project.

A policy brief is a summary that helps readers understand and likely make decisions about how to best move forward in the face of a specific challenge (most of the time in the form of a policy). Policy briefs provide overviews of policy options, research and may provide options for moving forward.

Working in pairs (to be assigned randomly by your instructor), prepare a four-to-five-page policy brief (excluding references and annexes) to be used for advocacy by a decision-maker or a health-related NGO. Policy briefs are non-technical summaries used for advocacy. The Final Policy Brief will be assembled using the 4 Policy Brief Assignments due in weeks 2, 3, 4, and 5 as the foundation.

5. Choose a planetary health challenge of your interest and choose the primary audience for your policy brief. You may want to discuss with the faculty before choosing your topic. The topic you choose for this assignment will be the same one you will develop for your following assignments.

- A. Start familiarizing yourself with the resource *A Student's Guide to Writing a Global Health Policy Brief*. Global Health Education and Learning Incubator at Harvard University 2019. <http://repository.gheli.harvard.edu/repository/10607>.

B. Draft a 750-word introduction to your policy brief. The introduction should contextualize the challenge. Make sure you include burden of disease metrics (and other epidemiological data) and that you are using comparative data of the planetary health challenge you chose, as well as analyzing future trends in relation to the context of your challenge.

C. As part of the introduction create a diagram that explains how the different changes of environmental systems are impacting this health challenge. The diagram should include feedback loops and root cause mechanisms driving the changes in environmental systems and clear directionality on how these affect health outcomes in humans. For this diagram you have to analyze the challenge using a determinants of health framework. You may choose to use any type of diagram you see fit (e.g., spider map, process map, tree map, spaghetti diagram). The diagram should be self-explanatory. Explain your diagram in a 5–7-minute video or a 500-700 word document.

6. Create a stakeholder map with the actors that are relevant to the planetary health challenge. You may choose to use any type of diagram you see fit (e.g., spider map, process map, tree map, spaghetti diagram). Place the stakeholders in an "interest vs power" matrix and explain your choices in regard to where you have placed them in the interest vs power matrix.

7. Analyze your challenge from a perspective of equity. Support your claims with data points and advocate for the populations you deem should be prioritized. Write up your analysis in an 800 word document.

8. Start drafting recommendations and solutions that you plan to pitch as part of your policy brief. Make sure they are addressing comprehensively the topic and are not looking for silver bullet solutions. These recommendations should incorporate the analysis you have provided in previous sections of the policy brief. Justify your selection of recommendations and submit your draft recommendations in an 800 word document.

9. Complete the policy brief on your challenge and make a case for why it needs to be a priority and how to move forward. Use current evidence to support your suggestions.

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- Executive Summary
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