PROPOSAL FOR PLANETARY HEALTH

(10-25-22, revised 10-30-22, revised 12-1-22, revised 12-7-22, revised 12-28-22, revised 1-2-23, revised 2-18-23, revised 3-19-23, 3-28-23, revised3-20-24, revised 3-29-24, revised 4-2-24, revised 4-3-24, revised 4-14-24, revised 4-15-24, revised 4-22-24, P. Prelock)

OVERARCHING GOAL: UVM will be the recognized global leader in planetary health.

> Our research, UG and GR education and policy work promotes human health and prosperity while preserving the environment and finding solutions that foster resilience in human and animal populations in changing environments involving global systems of land, air, water, and life.

OUTCOME: We will be ranked as one of the top 71 American Association of Universities (AAU) research institutions by 2030.

WHAT IS PLANETARY HEALTH: Planetary Health is the understanding that human health and human civilization depend on flourishing natural systems and the wise stewardship of those natural systems. [1]

WHAT IS PLANETARY HEALTH AT UVM: *Human well-being is inextricably linked with the health of the environment. The UVM Planetary Health Initiative explores these connections and inspires action so that both people and planet can thrive.*

UVM's NEW BRAND POSITION: *For individuals committed to a thriving future for people and planet, UVM is the leading university where discovery, creativity, community, and action coalesce to secure a healthier, greener tomorrow.*

WHY UVM: *Our research examines the relationship between human well-being and the health of the environment. We aim to build healthy environments and healthy societies with both a rural and global focus.*

The University of Vermont places a strong emphasis on research and education related to the health of human societies and the natural environment, spanning the natural and social sciences, the humanities, and professional education. We have faculty doing related work across our eight colleges, including the College of Arts & Sciences (CAS), the College of Agriculture and Life Sciences (CALS), the College of Education and Social Services (CESS), the College of Engineering and Mathematical Sciences (CEMS), the College of Nursing and Health Sciences (CNHS), the Grossman School of Business (GSB), the Larner College of Medicine (LCOM), and the Rubenstein School of Environment and Natural Resources (RSENR).

Catalyzing this emphasis, the university has inter-connected and interdisciplinary research centers and institutes devoted to the environment, climate change, food systems and farming, energy, water, education for sustainability, the social sciences focused on the well-being of individuals and groups in the context of their family their community and society, and the humanities with their understanding of the activities, attitudes, and ideologies of health and the environment beginning in the past. These centers and institutes (see Figure 1) demonstrate the synergistic links between human health and the health of the environment.

For example, well-functioning food systems are essential to human survival but face many challenges. UVM is the home of a new, USDA-funded Food Systems Research Center (FSRC) connecting governmental and university scientists to better understand environmentally sustainable small and medium sized farms and food systems that characterize Vermont and the northeast that can be scaled nationally and globally. Additionally, we have national experts in food ethics in our Department of Philosophy. We have a new Nutrients and Bioactives Lab (The NAB Lab) for Planetary Health in the FSRC, a nutrient analysis laboratory that will explore the nutritional benefits of grass-fed dairy, among other topics. The FSRC has also developed a strategic goal to collaborate across centers and institutes to focus on planetary health and regenerative agriculture. Our UVM Extension program works across Vermont to implement best practice in agricultural and community practices, providing a stellar living laboratory for our faculty and students to strengthen our local food systems with sustainable practices. We were the first, and only university in the country to offer undergraduate, master's, and doctoral degrees in Food Systems. We also offer rapidly expanding programs in agroecology, nutrition, animal, plant and soil sciences. With expertise in agroecology, our newest Agroecology Institute, we are not only making farming scientifically and ecologically sound and sustainable we are addressing the economic viability and social justice of our food systems. We also have critical expertise in food agency, that is, the ability to obtain and prepare food in the context of one's economic environment.

As another example, there is clear evidence that "nature" supports mental and physical health at the individual level (e.g., stress reduction, attention restoration, improved adherence to physical activity, etc.),[2,3,4,5] as well as at the social and community level where policy impacts our ecological model of health (e.g., access to green spaces, etc.).[7.8,9] With UVM's recognition as an Osher Center for Integrative Health (one of only 11 worldwide), that also involves the social sciences of health, we are poised to become a national leader for re-envisioning a healthcare system that promotes the health of patients, providers, and the planet. The Osher Center builds on our reputation for being a "green" campus in a "green" state and Burlington's distinction as a "healthy" city. We know that contact with nature benefits patients (e.g., gardening therapy, forest bathing), staff (e.g., integrating plants and nature sounds into break rooms), and the public (e.g., garden atriums and nature paths on hospital grounds for visitors to seek respite, community gardens that promote access to green space and fresh foods). There is also growing evidence of the unintended consequences of healthcare on the environment and public health. The U.S. healthcare system contributes 10% of the nation's greenhouse gas emissions that lead to anthropogenic climate change--arguably the most pressing environmental threat of our time.[10] Likewise, healthcare delivery results in large volumes of hazardous, infectious, and pharmaceutical waste, which lead to air and water pollution and are a direct threat to the workers who handle these pollutants and the communities where hazardous waste facilities are located, issues which are linked to environmental justice. Our previous research has shown that the early integration of palliative care into oncology can reduce the environmental consequences of medical supply chains and waste generation. Likewise, promoting healthy behaviors that prevent diseases such as type 2 diabetes positively impact a reduction of pharmaceuticals, thereby minimizing pharmaceutical pollution of surface waters such as metformin detected not only in our own Lake Champlain but along many surface waters around the globe. Our integrative health

research can be used to compare the environmental and public health burden of various conventional and integrative health modalities and identify opportunities for minimizing these harms. We are also preparing our undergraduates to be leaders in planetary health as the only institution offering minors in integrative health and integrative health and wellness coaching.

In 2017, UVM launched the Gund Institute for Environment to mobilize scholars and decision makers to understand and tackle critical environmental challenges. Driven by the belief that research should inspire action, the Gund Institute has forged a bold strategy for impact by:

- Connecting scholars across multiple disciplines with government, business, and society
- Catalyzing innovative ideas by funding and leading world-class research on the most pressing environmental issues
- Solving urgent environmental problems with solutions and partnerships that inspire bold action.

As UVM's first University-wide environmental research institute, the Gund Institute has catalyzed nationally distinctive research, connected UVM Land Grant research solutions with decision makers in Vermont and beyond, and made significant investments in student success. For example, UVM established a Vermont Climate Assessment, a new collaboration across three colleges/schools to provide the definitive science on climate change in Vermont and guiding statewide action under the Vermont Global Warming Solutions Act. Our National Food Access and Covid Research Team led one of the largest U.S. studies of pandemic food access, showing that food insecurity hit 30% of U.S. households and this research is helping policymakers address the pandemic's impacts on food insecurity and health—and will inform future U.S. Department of Agriculture (USDA) disaster responses. Our Consortium on Crop Genetic Heritage is exploring crop diversity's role in climate resilient agriculture to improve access to culturally important crops worldwide. We are using used techniques to examine the impact of COVID-19 on the U.S. seafood industry and this approach cut the time needed to gather data and meant lawmakers were able to understand the major impacts on fisheries and act swiftly. We launched a study of the world's largest refugee camps to understand how our changing environment—with rising heatwaves, storms, and flooding—can contribute to disease outbreaks and other health risks. This humanitarian research project will help partners to improve health conditions for some of the world's most vulnerable citizens. We continue to build on our leadership on the study and conservation of pollinators (supporting wild and managed bees) which are essential to the world's food supply but are experiencing steep declines from climate change, disease, and pesticides in North and Central America. UVM is also becoming a national leader in water management with the launch of the Cooperative Institute for Research Operations in Hydrology (CIROH).

UVM's Complex Systems Center and Gund Institute are also collaborating on a large study aimed at testing the mental health impacts of nature exposure, compared to those of more traditional interventions like counseling and exercise. They are using Oura rings (activity trackers packed into a ring that measure biometrics related to stress) and 600 UVM undergrads currently are wearing them. Randomized interventions have begun. We have strengths in

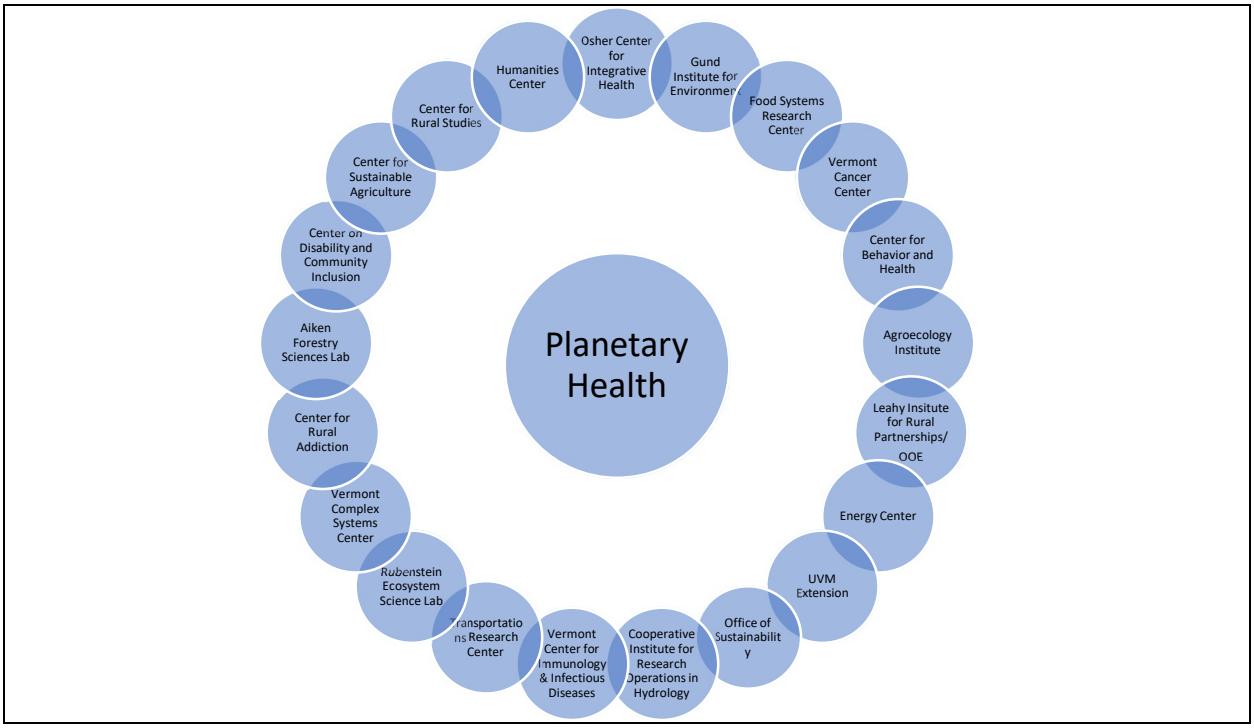
technology that can be used to innovate as we attempt to find solutions to the environmental and health challenges we face.

An example of putting solutions into action from a planetary health perspective, UVM has received $10M in funding to create a stable renewable grid as part of our new Energy Center. This includes a new facility at the McNeil Plant, with the new NEST technology to be put in place to run scenarios on the grid and some smaller laboratory test beds.

The Vermont Center on Behavior and Health, established in 2013, is an interdisciplinary research center investigating relationships between personal behavior patterns (i.e., lifestyle) and risk for chronic disease and premature death as well as the social sciences of health. The Center's work focuses on health disparities for the most vulnerable populations, particularly among the socioeconomically disadvantaged where risk factors are overrepresented. Applying knowledge from the disciplines of behavioral economics and behavioral pharmacology, the Center's research emphasizes increased understanding of vulnerability to unhealthy behavior, and the use of incentives and other behavioral and pharmacological interventions to support healthy behavior change interventions and policies. The Center is the only NIH-funded center that is applying the disciplines of behavioral economics and behavioral pharmacology to tackling these enormous, interrelated U.S. public health challenges.

The figure below provides additional examples of university-wide centers, institutes, and laboratories where research is occurring related to planetary health. Researchers at these centers are conducting research on the intersection between health and the environment in the natural/physical sciences, social sciences, and the humanities. Additionally, we have academic programs with related research, including public health, environmental sciences/studies, health and society, environmental history, the ethics of food, cultural history of sustainability, geohealth, one health, global health, and education and social services. Many of our researchers have either a rural or a global focus in their work, lending us strength in those areas. Importantly, the humanities are excellent translators of planetary health issues and research to the public.

Figure 1. Selected UVM Centers, Institutes and Laboratories with Research Connections that Address Planetary Health



UVM will connect humans and the planet, to better understand that the health of one, impacts the other and, to recognize that if we explore the links and the challenges, we can find solutions that lead to health for humans, animals, and the planet. We cannot find these solutions, however, if we don't also have the academic programs that support the background knowledge and exploration of these critical concepts.

WHY UVM: *Our educational programs prepare global leaders to address environmental, health and social justice challenges.*

There are 12 principles that guide planetary education and support the engagement of all disciplines sharing core messages with students about the importance of planetary health. These principles can be found here and clearly demonstrate the role of the humanities as well as science, technology and health in this effort. A group of faculty leaders have adapted these principles for clarity and connection to UVM (see Appendix A). These principles suggest students learn about the linkages between population health and the environment, recognize the urgency and complexity of the issues at a global level, contribute to policies that improve the health of the population and learn ways to organize movement for positive change in their local and global community. In addition, the principles suggest a need to communicate about the challenges we face with ideas for solutions, make transdisciplinary connections and think systemically when offering solutions, understand the complexities of inequality and inequity, and recognize the economic, political, and social impact of the environment on human health.

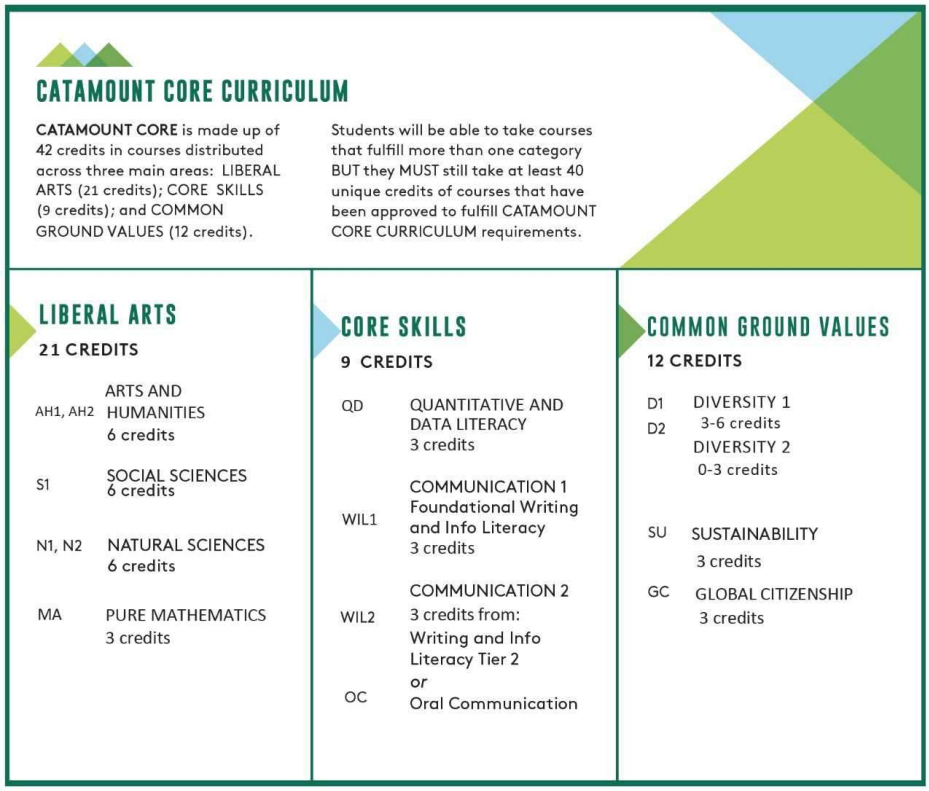
Education for our students would also entail ways to bring governing bodies together to collaborate across populations and regions to address the challenges of planetary health and be prepared for a range of responses to environmental change. Recognizing the planet is now *un*healthy, it requires this new focus, precisely because of the activities, attitudes, and ideologies beginning in the past. This is relevant to so many disciplines in the humanities including Classics, Religion, History, and Philosophy.

Further, many of the 17 UN Sustainable Development Goals fit well into UVM's concept of planetary health. The generation we are teaching now will be the changemakers to help achieve the expected outcomes for these global goals. As global citizens we want our students to see themselves as part of a larger community and empower them to contribute to the changes in practices and values that guide the community in which they will live and learn. Finally, we want our students to understand the historical context for planetary health as understanding the past can certainly help address the problems of the future. We have researchers in the humanities who have published books about the backstory of sustainability and systems science in classical antiquity that expressly invokes the UN Sustainability Goals as well as a recent book examining ancient ways of living in a dying world.

UVM has established a learning context that is responsive to these principles for planetary health education. We offer a core curriculum that prepares our students to be global citizens who learn to build a sustainable environment, ensure health equity, and change policy that facilitates planetary health. All undergraduate students complete core curriculum requirements in global citizenship, sustainability, diversity and data and communication literacy in addition to the liberal arts (i.e., arts and humanities, social and natural sciences, mathematics) and can participate in internships, service learning, global travel and research that advances their knowledge of planetary health.

Our Catamount Core Curriculum (see Figure 2) and our goals for integrative learning prepares our undergraduate students through curricular and co-curricular activities that enables them to make connections between ideas and experiences so they can synthesize and transfer their learning to addressing complex situations such as exist for planetary health. Our masters' and doctoral programs prepare students to both advance their knowledge in building environments and societies that are healthy, sustainable, and socially just and add to that knowledge with research projects having a global environmental, health, and social impact.

Figure 2. Catamount Core Curriculum for UVM students



UVM has 32 undergraduate majors, 26 minors, 23 masters, 22 doctoral and 12 certificates of graduate study to support students' preparation in contributing to planetary health. Table 1 highlights undergraduate programs with connections to health and the environment and Table 2 highlights graduate programs where students and faculty are engaged in work that supports the health of our environment and the health of our society. With nearly 100 academic programs available to our students in areas related to planetary health, we are in a unique position to build additional capacity in planetary health with the expertise of our faculty. The contributions of art, film, music, literature, and dance to human health and well-being are, of course, not insignificant. We are also primed to expand our interdisciplinary graduate programs emphasizing the role of the humanities in deepening our understanding of health through storytelling in the narrative, visual, and performing arts.

Table 1. Undergraduate Academic Programs with Specific Connections to Health and the Environment

Programs	**Major**	**Minor**
Agroecology & Landscape Design	X	X
Animal Science	X	X
Anthropology	X	X
Behavioral Change Health Studies		X
Biological Science	X	
Biomedical Engineering	X	

Community Engagement	X	
Community Centered Design	X	
Community & International Development	X	X
Civil Engineering	X	
Economics	X	X
Electrical Engineering	X	X
Environmental Engineering	X	
Environmental Sciences	X	
Environmental Studies	X	
Exercise Science	X	
Food Systems	X	X
Forestry	X	X
Geography & Geosciences	X	X
Geospatial Technologies		X
Global Studies	X	X
Green Building & Community Design		X
Health & Society	X	X
Historic Preservation		X
Human Development & Family Science	X	X
Integrative Health & Wellness Coaching		X
Integrative Health Care		X
Mechanical Engineering	X	
Microbiology	X	X
Neuroscience	X	X
Nursing	X	
Nutrition & Food Sciences	X	X
Parks, Recreation & Tourism	X	X
Plant Biology	X	X
Political Science	X	X
Psychological Science	X	
Public Health Sciences	X	
Sociology	X	X
Soil Science		X
Sustainability, Ecology & Policy	X	
Wildlife & Fisheries Biology	X	X
Zoology	X	X

Table 2. Graduate Programs that Support the Health of our Environment & Society

Programs	**Masters**	**Doctoral**	**Certificate of Graduate Study**
Agroecology			X
Animal Biosciences	X	X	
Biology	X	X	

Biomedical Engineering	X	X	
Cellular, Molecular & Biomedical Sciences		X	
Civil & Environmental Engineering	X	X	
Clinical & Translational Science	X	X	X
Community Development & Applied Economics	X		
Community Resilience & Planning			X
Complex Systems & Data Science	X	X	X
Counseling	X	X	
Dietetics	X		
Ecological Economics			X
Electrical Engineering	X	X	
Epidemiology			X
Field Naturalist	X		
Food Systems	X	X	
Healthcare Management & Policy			X
Interdisciplinary Study of Disabilities			X
Interprofessional Health Sciences		X	
Leadership for Sustainability	X		
Microbiology & Molecular Genetics	X		
Natural Resources	X	X	
Neuroscience		X	
Nursing	X	X (DNP); MEPN	
Nutrition & Food Sciences	X		
Occupational Therapy		X (OTD)	
Physical Activity & Wellness Science	X		
Physical Therapy		X (DPT)	
Plant & Soil Science	X	X	
Plant Biology	X	X	
Psychological Science	X	X	
Public Health	X		X
Resiliency-Based Approaches with Families, Schools & Communities			X
Social-Emotional Health and Inclusive Education		X	
Social Work	X		
Sustainable Development Policy, Economics & Governance		X	
Sustainable Enterprise			X
Sustainable Family Enterprise			X
Transdisciplinary Leadership, Creativity & Sustainability		X	

WHERE DO WE GO NEXT:

UVM's leadership in Planetary Health should draw on key principles that guide our work now and in the future. We will:

- Build on our current expertise in the science and engineering of sustainable practices within a framework of equity and justice.
- Build on our current impact for ensuring healthy societies and healthy environments across teaching, scholarship, service, and policy development and advocacy
- Prioritize and enhance our commitments to diversity, equity, inclusivity and justice particularly in the areas of international education and global engagement
- Leverage our commitment to Vermont demonstrating our ability to solve complex problems locally as well as regionally and globally
- Support cross-college, interdisciplinary teaching and research efforts that include faculty, staff, undergraduate, and graduate students
- Highlight our unique rural nature and related expertise.

Our current resources can be transformed to support the following frameworks for promoting Planetary Health:

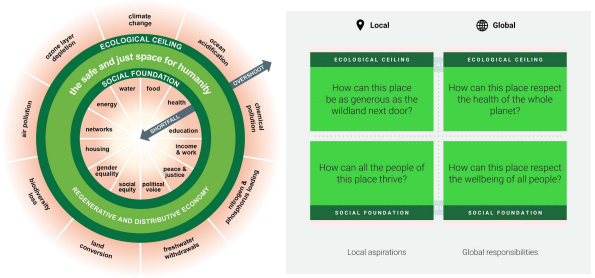
- Equity-focused solutions to environmental and economic challenges
- Equity-centered science and technology solutions
- Integrative health, mental health, and public health systems
- Comprehensive and integrated educational and social systems across the lifespan
- Values-oriented humanities education that emphasizes intercultural communication skills that address conflicts occurring at the local, national, and global levels as well as helps us understand the history of environmental and health changes over time.

We have faculty aptitude for interdisciplinary and collaborative research. We have more than 2,300 acres across ten sites in Vermont[1] as natural areas for educational and scientific purposes that are compatible with the preservation these areas. We have donors who have a 'cause-based' orientation for giving. We have been successful securing funding from granting organizations, foundations and corporations invested in solving complex societal, health and environmental issues. And we have a strong policy and advocacy orientation across our students, faculty, departments, and colleges. With these assets, we are primed to double down on our responsiveness to ensuring planetary health.

Initial Steps Taken

- Several Meetings have occurred since the fall of 2022 to engage faculty, staff, students, & donors in the discussion (see Appendix B for a listing of those meetings)
- Several focus groups were held during several group faculty meetings and key themes were identified (see Appendix C)
- Academic Planning Team (Faculty Senate Executive Council and Provost's Integrated Leadership Team) reviewed the 12 Lancet planetary health educational principles and 3 faculty adapted those principles for UVM (see Appendix A)

- Working group established to define planetary health at UVM and propose a roll out of the Planetary Health Initiative
- *Journal of Planetary Health* through UVM Press is endorsed by the Planetary Health Alliance
- Planetary Health Summit planned by the UVM Osher Center for Integrative Health in October 2024
- Osher Center hires a Director for Planetary Health Research
- Honors College course on Planetary Health is approved for the Fall 2024
- Jeffords Grant funding through the Provost's Office will be allotted to cross-college Planetary Health Initiatives
- UVM Planetary Health work aligned to the Vermont Prosperity Project
- Identifying funding already supporting the planetary health initiative
- School of the Arts is developing curriculum related to art and health
- Coursework in Ethics of Eating in Philosophy, Environmental History in History, Sustainability: A Cultural History and How to think About Animals in Environmental Studies, and Utopias, Old and New in Political Science Cultural are selected examples of what is already occurring across our humanities curriculum
- Graduate nursing program has incorporated coursework in planetary health into their new master's curriculum
- Larner College of Medicine, in collaboration with the College of Arts & Sciences and the Gund, have submitted a large federal grant on health and the environment
- Opportunity, spousal and Henderson fellow hires through the Provost's Office will emphasize those who can contribute to the planetary health initiative
- UVM GO experience planned in Planetary Health on Nature Conservation
- CELO has sponsored service-learning courses with a focus on planetary health
- UVM's Comprehensive Inclusive Excellence Action Plan has laid out distinctive areas of excellence in 6 areas: health equity; equitable community resilience; climate change—environmental equity, justice and inclusion; sustainable food systems with equitable access to healthy food; inclusion towards innovation of complex systems; and value-based leadership aligned with Our Common Ground
- UVM's Campus Comprehensive Sustainability Plan has been organized around 4 major themes: decarbonization, operations, governance and people, research and learning.
- We are also considering adapting the Doughnut Economics model by Kate Raworth to planetary health and our cross college /cross disciplinary connections (see below) and engaging community and state partners



Doughnut Economics by Kate Raworth

Conclusion

Ultimately, our objectives for advancing our leadership in Planetary Health address four primary objectives:

1. Increasing research that advances our knowledge of ways to improve human health in the context of a constantly changing environment.
2. Expanding curricular and co-curricular programs that emphasize the health consequences of climate change, particularly for vulnerable populations.
3. Developing policy that offers science- and technology-based and economically-sustainable solutions to our current health and environmental challenges.
4. Collaborating with the state

"Our resulting environmental "crisis" is really a long-festering malaise rooted in defective outlooks and priorities . . . We tend to blame trains, planes, automobiles, and, unfairly, domesticated livestock for our climate predicament and its knock-on effects. But it's really misplaced human wants and desires, a desertification of values, if you will, and errors of judgement and overreach that are the sources of our environmental catastrophes . . . To fix things will require changes in human behavior and values. Literature, philosophy, the arts, religion — the evidential bases whose interpretive methods inform the main argument of this book and what are called "the humanities" for good reason — have been addressing the anthropic malaise that has precipitated our current crisis long before the caustic industries and technologies we now possess and proliferate without restraint even existed." (personal communication, Mark Usher, excerpt from book in press)

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Appendix A

Twelve Principles for Planetary Health

Louis deRosset, Colby Kervick, and Lizzy Pope* March 2024

Planetary health is the study of the interaction between human health and well-being and environmental change. UVM's pursuit of planetary health initiatives is guided by these twelve principles.

1. A Planetary Health Lens: Many problems can be better understood and addressed when they are set in a context which highlights the link between our stewardship of the earth and future population health.
2. Urgency and Scale: Problems concerning planetary health are urgent and gigantic involving the interactions of geography, cultural context, politics, and socioeconomic factors.
3. Policy: We can best translate research on planetary health into context-specific policy and action both locally and globally by recognizing gaps in evidence and then investigating the impact of environmental change.
4. Organizing and Movement Building: Mobilizing communities and managing resources are important skills for building and sustaining movements that advocate for policy change.
5. Communication: Addressing problems concerning planetary health requires effective communication across disciplinary, geographic, cultural, and linguistic boundaries.
6. Systems Thinking: Solving problems of planetary health requires understanding the ecological and social systems in which they figure.
7. Equity: Our work must heed the demands of equity, because the most severe effects of environmental change on human health are felt by people in marginalized social positions.
8. Bias: Political, social, or economic dynamics may affect the presentation and perception of the health effects of environmental change, so we need to keep the biases and interests of different stakeholders in mind.
9. Governance: Governance structures must be critically examined to promote effective cooperation and maximize regional capacity to take action on planetary health challenges.
10. Unintended Consequences: When facing surprising and unexpected consequences of environmental change on human health, mindsets that facilitate adaptation, sustainability and resiliency are essential.
11. Global Citizenship and Cultural Identity: We need to recognize our membership in both local and global communities and draw upon our unique cultural identities to take positive action locally and globally.
12. Historical and Current Global Values: Addressing planetary health challenges requires examining the historical circumstances in which they emerged and intentionally incorporating perspectives of those who have been marginalized to cooperate on solutions.

* This document is adapted from Stone, et al., "Cross-cutting principles for planetary health education," The Lancet 2:192-3, May 2018.

APPENDIX B

Planetary Health Meeting Summary

3/20/24

10/26/22 Provost, President, Foundation CEO

12/7/22 Provost, CALS, CEMS, RSENR Deans

12/20/22 Provost, Osher Center Leadership (monthly)

12/20/22 Osher Center Planetary Health meeting

1/18/23 Provost, Council of Deans, OVPR, Foundation

1/23/23 CESS Faculty & Staff meeting

2/7/23 Osher Center Planetary Health meeting

3/20/23 Provost, OVPR, Endowed Professors, University Scholars, University Distinguished Professors

- *Should we pursue a thematic research agenda that considers our strengths and could become an area of distinction for UVM?*
- *It has been proposed by some that a focus on planetary health (**see confidential draft attached)** might be the right distinctive focus. What are your thoughts about that? Is there a different thematic focus you would like us to consider?*
- *Do we want to strategically invest in this theme by establishing cluster hires and Foundation funding to support efforts in this area?*

3/22/23 Provost, OVPR, Endowed Professors, University Scholars, University Distinguished Professors

3/23/23 Provost, OVPR, Endowed Professors, University Scholars, University Distinguished Professors

3/29/23 Provost, Student Government Association Forum

4/11/23 Provost, OVPR, Center and Institute Directors Research Forum

4/14/23 Provost, OVPR, Osher Center Leadership

5/1/23 Provost, Graduate Student Senate

5/18/23 Osher Collaborative Planetary Health

8/17/23 Academic Leadership Council Retreat (Deans, Vice Provosts, academic-adjacent Vice Presidents and Chiefs)

Discussion Questions: How can the university benefit from alignment around a planetary health vision? Does the vision require refinement? How can we more fully engage our faculty, staff, and students in this vision? What obstacles do we see and how can we overcome them?

9/12/23	RSENR Faculty Meeting
9/12/23	Libraries Faculty Meeting
9/15/23	CEMS Fall Advisory Board
9/18/23	Provost's Planetary Health Presentation - Agroecology Global Forum
9/21/23	CNHS Advisory Board
9/23/23	Provost's Campus Message and EPIR Report
9/27/23	LCOM Faculty Meeting
9/29/23	CALS Faculty Meeting
10/9/23	Faculty Senate Executive Council
10/13/23	GSB Board of Advisors meeting
10/23/23	Academic and Student Success Leaders Meeting
10/24/23	Provost, Gund Institute Director
10/25/23	Provost, OVPR
10/27/23	CAS Board of External Advisor
12/13/23	GSB Faculty Meeting
1/3/24	Director, Environmental Program
2/7/24	Osher Center Affiliates meeting
2/13/24	Director, Leahy Institute for Rural Partnerships
2/15/24	Academic Planning Committee
2/20/24	Planetary Health Launch Working Group
2/23/24	Planetary Health Launch Sub-group: PH Definition
3/5/24	Planetary Health Working Group
3/6/24	CESS Faculty/Staff Meeting
3/20/24	Planetary Health Working Group
3/25/24	Faculty Senate Meeting
4/3/24	Planetary Health Working Group
4/16/24	Planetary Health Working Group
4/19/24	Planetary Health Initiative Rollout
4/22/24	Planetary Health Initiative Activity

APPENDIX C

KEY THEMES DRAWN FROM THE FOCUS GROUPS on Planetary Health

(P. Prelock, 7-1-23; revised 7-23-23)

NOTE: I used ChatGPT to pull out the initial themes from the content I submitted from the focus groups; I then did a more specific review, edited content, and themes to eliminate redundancies, and collapsed similar items

QUESTION 1: ***Should we pursue a thematic research agenda that considers our strengths and could become an area of distinction for UVM?***

1. Strategy, Focus and Alignment: Important to have a strategy for "punching up" and focusing on a specific theme or set of themes for research.
2. Marketing, Framing and Impact: Our research agenda is related to marketing and framing the university's activities and its impact to the rest of the world.
3. Inclusivity in a Comprehensive University: Concerns raised about whether a substantial focus on specific themes would push the university away from being comprehensive and inclusive of faculty and programs that may not align with the chosen themes. A theme should have coherence that can be interpreted through different lenses, that involve constituents across campus and broaden the base of research excellence at UVM.
4. Collaboration: Interdisciplinarity is valued, and a thematic approach is seen as a way to facilitate collaboration and interdisciplinary research as well as create potential for UVM to collaborate with other entities globally, particularly in pursuit of shared visions like the United Nations Sustainable Development Goals.
5. Vermont Brand: Aligning the thematic approach with the location of the institution and the Vermont brand, particularly in relation to environmental and social responsibility is important.
6. Resource Utilization and Investment: Tangible resources are needed to achieve new initiatives and with limited resources shared services could be used more effectively across campus.
7. Grant Funding and Competitiveness: A thematic focus increases the university's ability to compete for joint grant funding opportunities as well as having a clear focus for attracting donors.

   QUESTION: Are there examples of institutions similar in size to UVM that have successfully identified a research strength and pursued it.

QUESTION 2: ***It has been proposed by some that a focus on planetary health might be the right distinctive focus. What are your thoughts about that? Is there a different thematic focus you would like us to consider?***

1. Leadership and Vision: UVM has an opportunity to take a leadership role in the planetary health field, setting ambitious goals, creating a long-term vision, and demonstrating institutional will and courage to drive meaningful change.
2. Collaboration and Integration: There is a strong emphasis on the importance of fostering interdisciplinary collaboration and integrating various disciplines and perspectives to tackle the planetary health initiative effectively.
3. Institutional Identity and Branding: The planetary health initiative can align with the university's existing strengths, values, and brand identity. It has the potential to shape the university's image and attract students.
4. Community Engagement: Planetary health has the potential to address the challenges of Vermont's rural context and integrating community perspectives in research and education.
5. Sustainability, Environmental Justice and Inclusivity: Planetary health is viewed as an opportunity to address sustainability issues, promote environmental justice, and advance social and cultural prosperity. It highlights the need to consider the impact of climate change and other environmental factors on human well-being. Further, it is inclusive of various stakeholders, incorporating different disciplines (including the humanities and arts), and is accessible and relatable to a wide range of people.
6. Challenges and Risks: Implementing a large-scale initiative like planetary health will require overcoming cultural barriers, engaging faculty and staff, securing funding, and navigating potential conflicts between different disciplines and areas of expertise.
7. Measurement and Evaluation: It will be important to measure progress and define the success criteria including establishing targets, assessing outcomes, and regularly evaluating the impact of the initiative over time.
8. Student Recruitment and Education: A planetary health initiative has the potential to attract students, particularly those interested in global health and sustainability. Integrating planetary health concepts into the university's core curriculum and educating future generations on these topics is critical.

QUESTION 3: ***Do we want to strategically invest in this theme by establishing cluster hires and Foundation funding to support efforts in this area?***

1. Building Interdisciplinary Teams using Targeted Recruitment: Creating interdisciplinary teams was emphasized, highlighting the need to start small and gradually scale up. There was excitement about recruiting and hiring individuals from various areas, including cluster hires of both research faculty and post docs, to enhance this interdisciplinary approach. The challenge of resource competition and potential opposition across campus was acknowledged.
2. Using a Phased Approach with a Clear Purpose: Some recommended starting with a few pilots to assess their success and viability while finding a "home" for those who do not feel connected to a particular niche. The hiring process could be conducted in phases with a clear purpose behind the hiring initiatives.
3. University Forum and Climate Change: Organize a university forum to discuss the importance of this work, how climate change impacts the future, and how hiring faculty as catalysts for supporting development is crucial.

4. Diversification of Investments: Putting all resources into a single focus area was raised with a suggestion to diversify investments to avoid alienating existing departments and faculty.
5. Investment in Infrastructure: Investing in infrastructure, such as research staff, support staff, and physical infrastructure, was emphasized for the success of the focus area.
6. Changing Specialization and Brand: Hiring a significant number of people over a five-year period is seen as an opportunity to transform the nature of specialization and the university's brand.
7. Integrative Approach and Communication: The need for an integrative approach and effective communication was highlighted including educating and getting buy-in from faculty and stakeholders. It was suggested that feedback be gathered before announcing any action items or hires so that everyone feels heard and involved in the planning process.