

Dickinson Faculty Sustainability Research & Scholarship Inventor, 2024

Information about Dickinson faculty members' sustainability scholarship was collected via a questionnaire that was sent to all 219 full-time Dickinson faculty members in January 2024. The questionnaire presented definitions of scholarship and sustainability-oriented scholarship. Scholarship was defined as research, writing, analysis, creative work, presentations, performances, and other scholarly activities that are relevant to faculty members' academic disciplines and professional work. Sustainability-oriented scholarship is defined as scholarship for which any of the following is true:

- It explicitly addresses the concept of sustainability, OR
- It addresses the interdependence of ecological systems with social or economic systems, OR
- It addresses one or more major sustainability challenges.

Responses to the questionnaire were received from 146 faculty members, for a response rate of 67%. Eighty-one of the respondents reported that a significant portion of their scholarship is sustainability oriented. This represents 37% of all faculty members and 56% of faculty members who responded. 12 responses, however, did not provide a description of their scholarly work or identify the sustainability challenges addressed by their scholarship. When these responses are excluded, the number of faculty who engage in sustainability oriented scholarship and provided information about how their scholarship addresses sustainability drops to 69, representing 31.5% of all faculty. The inventory below was constructed using information provided by respondents about their scholarship.

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
American Studies	Lone Fight	Darren	Center for Futures of Native Peoples	In my Indigenous Intellectual Traditions we discuss the interdependence of the natural and social world at length. Additionally, in my Digital Cultures course, we do a unit on the genre of Solar Punk, wherein we discuss at length speculative visions of more sustainable Futures. Both of these topic also enter into my scholarly research and writing.	Rethinking the relationship between human and non-human peoples; interdependence as a fundamental philosophical orientation; land use and dispossession within settler-colonialism; asymmetric extraction and pollution as tools of oppression	Dickinson colleagues	
American Studies	Rufo	John	Women's, Gender, and Sexuality Studies, Africana Studies				
Anthropology and Archaeology	Biwer	Matthew		My research focuses primarily on human-environment interactions in the archaeological record. Much of my scholarly work relates to human transformation, adaptation, or impacts on their past environments. By excavating archaeological sites and analyzing archaeological plant remains and associated artifacts and features, I am collecting proxy data for ancient human-environment interactions. These data directly reflect human choice in resource production and acquisition. Recently, I have begun to address questions of human response to long-term climatic change in the Andes region of Peru. I relate these data to social and ecological systems using a historical ecology and archaeological perspective to consider sustainability via past outcomes of human-environment interactions	My scholarly work has directly engaged with sustainability challenges including water, food production, inequalities, and social justice.	Dickinson students	<p>Mallory A. Melton, Aleksa K. Alaica, Matthew E. Biwer, Luis Manuel González La Rosa, Gwyneth Gordon, Kelly Knudson, Amber M. VanDerwarker, and Justin Jennings</p> <p>2023. Reconstructing Camelid Diets and Foddering Practices During the Middle Horizon: Microbotanical and Isotope Analyses of Dental Remains from Quilcapampa, Peru. <i>Latin American Antiquity</i> 34:783-803.</p> <p>Biwer, Matthew E. and Mallory A. Melton</p> <p>2022. Starch granule evidence for the presence of chuño at the Middle Horizon (A.D. 600- 1000) site Quilcapampa La Antigua, Peru. <i>Journal of Archaeological Science: Reports</i> 45:103604.</p> <p>Nicholas Kawa, Mark Anthony Arceño, Ryan Goekner, Chelsea Hunter, Steven Rhue, Shane Scraggs, Matthew E. Biwer, Sean Downy, Julie Field, Kristen Gremillion, Joy McCorriston, Anna Willow, Elizabeth Newton, and Mark Moritz</p> <p>2021. Training Wicked Scientists for a World of Wicked Problems. <i>Humanities & Social Sciences Communications</i> 8(1):189.</p> <p>2023. Anthropogenic Landscapes and Sustainable Agriculture in the Wari Empire: Paleoethnobotanical Evidence from Huaca del Loro. Presented at the 88th Annual Meeting Society for American Archaeology, Portland, OR. (Matthew E. Biwer and Heidi Hepburn) - CoPresented with Dickinson College alumna Heidi Hepburn '23</p>

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Anthropology and Archaeology	Caine	Alyson		My research considers lived experiences of individuals from the past drawing on the environmental and social contexts in which they live.	climate shifts and their impact on health in the past	Other institutions	
Archaeology	Dufton	Andrew	Anthropology, Classics	My work looks at long-term urban change in North Africa in antiquity. This research involves asking questions of urban resilience, landscape change (particularly coastal change), and during fieldwork environmental change (through environmental sampling, other scientific techniques).	Urban resilience, renewal. Collapse of urban systems. Issues with sustainability of monumental construction/other construction projects (particularly in Roman periods)	Dickinson students	
Art & Art History	Arsenault	Todd		Themes relating to sustainability often find their way into the narratives of paintings and drawings.	Climate change, water use, consumption of natural resources, waste accumulation.	Dickinson students Dickinson colleagues	
Art & Art History	Bale	Andy		<p>My scholarly work addresses issues of sustainability through several photographic projects. From 2013-2021 my work with the Ese'Eja (an indigenous community in the Peruvian Amazon) we addressed several UNESCO sustainability issues and goals. Through our published book and traveling exhibition (which was seen by approx. 500,000 people) we highlighted and educated people across the U.S. about indigenous rights, the importance of the Amazon rainforest, illegal deforestation and illegal gold mining, and how indigenous knowledge plays an important role in our past, present and future.</p> <p>From 2019 to the present I've been involved in a photographic project which records, preserves and disseminates the stories of refugees, immigrants, indigenous people and diaspora, in the U.S. and abroad. Once again sustainability is a common thread throughout this project as people who are displaced from their country of origin often struggle to find basic humanitarian needs, such as shelter, food and water. We disseminate the collected stories of diaspora and address these issues through a traveling exhibition and visual workshops both in the U.S. and abroad. Our project will also address the concerns surrounding the rising number of climate refugees during our conference in Ireland in September 2024.</p>	No Poverty, Zero Hunger, Good Health and Well-Being, Quality Education, Gender Equality, Clean Water and Sanitation, Reduce Inequalities, Climate Action, Life Below Water, Life On Land, Peace Justice and Strong Institutions.	Dickinson students Other institutions Other disciplines Other countries	Photographic exhibitions across the U.S. and abroad that have been viewed by approx. 500,000-600,000 people.
Art & Art History	Cervino	Anthony	Studio Art				

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Art & Art History	Eng	Rachel		My work examines climate change, land use/development and life cycles through a variety of materials including clay, video projection, sound, and found materials (recycled).	Historically clay is a material that requires energy to change physical state into ceramics. For my work, I do not fire my clay and I re use it again and again. More recently I have been using local clay to consider how far my materials travel as well as working at the site where the clay was dug. Increasingly I work to involve the locality into each project to address environmental racism and specific aspects to a place.	Other institutions Other disciplines	<p>Solo Exhibitions</p> <p>2023 Uneath, Atlanta Contemporary, Atlanta, GA</p> <p>2023 Debris, Springfield Museum of Art, Springfield, OH</p> <p>2022 Deliberate Pace, Jane Hartsook Gallery, GHP, New York, NY</p> <p>2021 residue, Visual Arts Gallery, Depauw University, Greencastle, IN</p> <p>2020 to displace something, Flecker Gallery, Suffolk Community College, Long Island, NY</p> <p>Group Exhibitions:</p> <p>2023 Shifting Ecologies: Contemporary Artists and the Environment, Maguire Art Museum, Merion Station, PA</p> <p>2022 Cultivating Space, Rowan University Art Gallery, Glassboro, NJ</p> <p>2022 McColl Artists in Residence Exhibition, McColl Center, Charlotte, NC</p> <p>2019 Anthrocenes, Little Berlin, Philadelphia, PA</p> <p>2019 Landscapes & the Unbuilt, Rochester Contemporary Art Center, Rochester, NY</p>
Art and Art History	Conover	Eleanor		My scholarly work addresses sustainability insofar as it is conceptually linked to environmental ideas. As a painter, my work deals with the extrapolation of natural forms that are linked to environmental time and space. I consider the surface of my paintings to operate as a metaphorical site that relates to the notion of surface and ground, and the act of painting is related in process and outcome to ideas of building, extraction, forming, and breaking down. The paintings themselves are irregular in nature, and often the canvas support is visible on the face of the painting via a process of graphite rubbing, bleaching, or the use of semi transparent linen. While in painting terms this is linked to the discourse of painting as object, the acknowledgement of the structure can also be read in metaphorical or symbolic terms to consider the underlying structures or apparatuses that support the illusion of our current lived experience in environmental space.	The work is not didactic in nature, and thus it does not easily fit into easily defined "sustainability" terminology/categories. There is often a push to associate the work with science; often I find the science/art discussion around sustainability limiting for both fields. I consider the work to be more involved in the way that sustainability has become a humanistic concern due to the way that we see it as an existential threat. I'm less interested in thinking through how science and art can collaborate on more literal projects, such as the visualization of ice melt in the arctic, for example.	Dickinson colleagues Other institutions Other disciplines	<p>Selected Exhibitions</p> <p>2023. Side Angle Tide (solo), List Gallery, Swarthmore College, Swarthmore, PA</p> <p>2022 Right to Repair, curated by Caitlin MacBride, Hudson House, Hudson, NY</p> <p>2021 Learning from the Steep Slope (solo), Bad Water, Knoxville, TN</p> <p>2018 The Course of Weather (solo); C for Courtside, Knoxville, TN</p> <p>2017 Struttire Aperte: Libri d'Artista, Temple University Gallery, Rome, Italy</p> <p>Invited lectures</p> <p>2022 Public lecture, Swarthmore College, Swarthmore, PA</p> <p>2021 Public lecture, Alice C. Cole '42 Fellowship Talk, Wellesley College, Wellesley, MA</p> <p>2018 Public lecture, School of Art, University of Tennessee, Knoxville, TN</p> <p>2018 "The Mediated Seascape in the Roman Periphery," Print Think Rome, Rome, Italy</p> <p>I participated in a Dickinson Clarke Forum faculty seminar on the arctic in Fall 2022.</p>

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Biology	Boback	Scott		I have several projects that apply ecological principles to help solve real world problems. In some of these, I use ecology to try and mitigate an issue with an invasive species - an organism that we inadvertently introduced to a new ecosystem. The Brown treesnake is a damaging invasive species on the island of Guam. This species is so numerous it causes power outages by grounding electrical wires as it crawls from wire to tree. Some of my work attempted to increase our ability to find and remove Brown treesnakes from the environment. Burmese pythons are invasive in southern Florida and are likely responsible for massive decreases in native birds and mammals in the Everglades. With my colleagues at the USGS, we have studied the diet of these snakes to understand what they are capable of consuming in the wild. In other projects I have been investigating how climate change influences turtle populations. In the species I study (Painted turtles, Snapping turtles), temperature within the natal nest determines the sex of hatchlings - warm temps produce females and cool temps produce males. With a warming climate, these species are susceptible to population declines and even extinction if their nest temperatures are too high to produce any males. Some of my work has investigated how females might adjust their nesting in the face of increased ambient temperatures. With Maggie Douglas in ENST, we have been monitoring a native toad (American toad) on the Dickinson	Invasive species, climate change, anthropogenic land use, the role of native species in non-conventional farming (e.g., organic)	Dickinson students Dickinson colleagues Other institutions Other disciplines	<p>Manuscripts in preparation sustainability-oriented: Boback, S.M., Brandt, E.*, Bieber-Ham, L.*, Davidson, N*, McMahon, J.*, Miller, M., Page, R.*, Schwab, N.*, Staunton, D.*, Veselka, A*. Nesting ecology of a population of Painted turtles (<i>Chrysemys picta</i>) in Pennsylvania. In preparation for <i>Journal of North American Herpetology</i>.</p> <p>Douglas, M.R., Poisson, M.*, Marich, A.*, Kuppek, V.*, Duboyce, M.*, Spiro, A.*, and Boback, S.M. The American toad (<i>Anaxyrus americanus</i>): Friend or foe to food production? In preparation for <i>Frontiers in Sustainable Food Systems</i>.</p> <p>Published works sustainability-orientated 2023 Meshaka, W.E., Wingert, E., Riedle, D., Boback, S.M., Hughes, D.F. Demographic responses to eutrophic conditions from a Painted turtle integrate zone (<i>Chrysemys picta picta</i> X <i>C. p. marginata</i>) in Pennsylvania. <i>The Herpetological Journal</i>. 33:14-24. doi: https://doi.org/10.33256/33.1.1424</p> <p>2022 Boback, S.M., Nafus, M.G., Yackel Adams, A.A., and R.N. Reed. Invasive brown treesnakes (<i>Boiga irregularis</i>) move short distances and have small activity areas in a high prey environment. <i>Scientific Reports</i>. 12:12705 doi: https://doi.org/10.1038/s41598-022-16660-y</p> <p>2020 Boback, S.M., Nafus, M.G., Yackel Adams, A.A., and R.N. Reed. Use of visual surveys and</p>
Biology	Reynaga	Crystal					
Biology	Somers	Dana	Biochemistry and Molecular Biology				

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Biology	Wingert	Gene		<p>1 my multi-year research included comparing flower blooming times at Pine Hill arboretum with the same flowering times 89 years ago in the same place. This research addresses the impact of climate change on blooming times.</p> <p>2. Multi-year research on turtle nesting ecology at Wildwood Park to establish current baseline data upon which to base the impact of climate change in the future.</p>	minimizing development impacts on both sites.	<p>Dickinson students</p> <p>Dickinson colleagues</p> <p>Other institutions</p> <p>Other disciplines</p>	<p>Breeding Episodes of Eastern Spadefoot, <i>Scaphiopus holbrookii</i>(Harlan, 1835) in Central Pennsylvania. Walter E. Meshaka, Jr. Eugene Wingert, Randy Cassell, Pablo Delis and Sarah Mortzfeldt. Journal of Kansas Herpetology Number 40, December 2011.</p> <p>Status and Distribution of Eastern Spadefoot, <i>Scaphiopus holbrookii</i> (Harlan 1835) in Pennsylvania: Statewide Conservation Implications for an Imperiled Species. Walter E. Meshaka Jr. Eugene Wingert, Randy Cassell, Pablo Delis, and Noel Potter. Collinsorum: The Journal of Kansas Herpetology vol 1(2/3) September 2012</p> <p>Adult Body and Clutch Characteristics of the Spring peeper, <i>Pseudacris crucifer</i> (Wied-Neuwied, 1838) from a Single Site in South-Central Pennsylvania. Walter E. Meshaka, Sarah Bartle, Pablo R. Delis and Eugene Wingert. Collinsorum: The Journal of Kansas Herpetology. Vo. 1 number 2/3 September 2012</p> <p>Breeding and Larval Growth of the Marbled Salamander, <i>Ambystoma opacum</i> (Gravenhorst, 1807), From Two Adjacent Sites in South-Central Pennsylvania Walter E. Meshaka Jr1, Stephanie Williams2, Pablo Delis2 and Eugene Wingert3 Bulletin of the Maryland Herpetological Society Vol 49 Numbers 1-4 January-December 2013</p> <p>The Red_eared Slider, <i>Trachemys scripta elegans</i> (Wied, 1838), Established in Pennsylvania. Julia L. Russell, Eugene Wingert, Scott Boback and Walter E. Meshaka. Bulletin of the Maryland Herpetological Society. Volume 50 Numbers 1-2 January-June 2014</p>
Center for the Futures of Native Peoples	Truden	John		I am working on an article that explores how White perceptions of Indigenous racial purity influenced tribal sovereignty in East Texas during the Jim Crow era. Although it is not the main part of the project, the lumber industry and changing federal, state, and tribal policies towards forest management between 1930 and 1960 are intertwined throughout.	This article discusses the negative impact of clear cutting in East Texas as well as attempts by the Alabama-Coushatta Tribe of Texas to gain control over forest management practices.		<p>"Racial Mythology and Tribal Sovereignty: The Alabama-Coushatta Tribe and the State of Texas during Jim Crow" (In Development)</p> <p>"The Welfare Fraud Workaround: Political Conservatism, Tribal Sovereignty, and South Dakota's Campaign to Criminalize USDA Commodities on the Yankton Reservation, 1979-1983" (In Development)</p> <p>"Where Cowboys and Indians Meet: A Southern Cheyenne Web of Kinship and the Transnational Cattle Industry, 1877-1885" Western Historical Quarterly 50/4 (Winter 2019), 363-90</p>
Chemistry	Rathbun	Colin	Biochemistry and Molecular Biology	We are developing enzymes to degrade PFAS compounds in the soil.	Environmental contamination.	Other institutions Other disciplines	
Chemistry	Samet	Cindy		For Chem 141, Accelerated Gen Chem with Lab, the semester long research project that the students did addressed sustainability, and resulted in a publication in a scholarly education journal. It was a collaboration between a researcher who did the primary research, which I developed as a class research project related to the use of fruit peels to remove pollutants from water.		<p>Dickinson students</p> <p>Dickinson colleagues</p> <p>Other disciplines</p> <p>Other countries</p>	<p>All of the work I have done on sustainability related only to the 2 years in which I taught Chem 141, which is a research based course for top incoming science students (although sadly, this changed in COVID and has not returned to normal.</p> <p>"Fruit and Vegetable Peels as Efficient Renewable Adsorbents for Removal of Pollutants from Water: A Research Experience for General Chemistry Students", Cindy Samet and Suresh Valiyaveetil, J. Chem. Educ., 2018, 95, 1354-1358.</p>

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Chemistry	St. Angelo	Sarah		My projects in chemistry and the projects I support all have environmental/economic sustainability. In my projects, I investigate synthesis, characterization and application of nanomaterials. We use many earth abundant materials to develop catalysts for remediation of pollutants and materials for solar energy. I also support projects, like the biogas generator work at the Farm.	water/air pollution remediation, development of materials for solar energy, evaluation of biogas generator feed/effluent for efficient function and use of novel feedstock	Dickinson students Dickinson colleagues Other disciplines	
Chemistry	Witter	Amy	BCMB	I look at the chemical composition of commercial products with an eye towards designing safer products I teach a course on environmental chemistry which covers environmental justice issues	Water pollution, exposure to chemicals	Dickinson students	Witter, AE. 2024. Acute Toxicity of Petroleum Asphalt Seal Coat Leachates to <i>Ceriodaphnia dubia</i> is Linked to Polymer Preservatives. In review at <i>Science of the Total Environment</i> . Witter, AE. 2019. Quantification of azaarenes, hydroxylated azaarene derivatives, and other polar compounds released in urban runoff from two commercial sealcoat products. <i>Env Poll</i> , 254, Part B, 111103. Witter AE, *Nguyen MH*, *Baidar S, and Sak PB. 2014. Coal-tar-based sealcoated pavement: A major PAH source to urban stream sediments. <i>Env Poll</i> , 185, 59-68. Witter AE. 2011. Water for a Thirsty World: A Liberal Arts Seminar Course Designed for First-Year Non-Science Students. In: Middlecamp CH, and Jorgensen AD, eds. <i>Sustainability in the Chemistry Curriculum</i> . Washington, DC: American Chemical Society Symposium Series Books. 1087: 141-158
Computer science	MacCormick	John	Data analytics	A major theme of my scholarship is the public understanding of computer science. Within this, I am particularly interested in the impact of artificial intelligence on our society, and I have worked on public understanding of bias in artificial intelligence algorithms. This has an important social justice angle, and is therefore somewhat related to sustainability.	Social justice of artificial intelligence algorithms		I unintentionally created a biased AI algorithm 25 years ago – tech companies are still making the same mistake, lead article in <i>The Conversation</i> , May 9, 2023. https://theconversation.com/i-unintentionally-created-a-biased-ai-algorithm-25-years-ago-tech-companies-are-still-making-the-same-mistake-203734
Creative Writing	Su	Adrienne	Food Studies	I write both poetry and essays, and occasionally an essay addresses food issues, including sustainability. Sometimes poems tangentially address sustainability--such as in poems about gardening, eating, cooking.	The "elite" aspect of eating local, organically raised food. Cultural tradition vs. doing the right environmental thing.		"Between the Shopping Cart and the Chinese Restaurant." <i>Good Eats: 32 Writers on Eating Ethically</i> , eds. Melissa Goldthwaite and Jennifer Cognard-Black. NYU Press, 2024. 80-88. "Art Is Long, Planets Short: The Lasting Power of Carol Ann Duffy's 'The Woman in the Moon.'" <i>New Ohio Review</i> 23 (2018): 149-52.
Dance Program	Skaggs	Sarah	WGSS	As a witness to 9/11, my choreographic works are meditations on the effects of trauma on the body. I call my work, "post-disaster" dance. Those works are meditative, involve the audience, and are durational. From my experience in Dickinson's Valley and Ridge workshop, I understood how the UN Sustainability Goals in particular address my work in dance. SDG #3 Good Health and Well Being. My work speaks to our well being and the power of dance to foster a sense of well being.	Making the connections in my dance work more explicit to a wider public.	Dickinson students Dickinson colleagues Other institutions Other disciplines	
East Asian Studies	Bates	Alex	Film and Media Studies	A significant portion of my work takes an environmental humanities approach. My current project looks at nature and disasters in fiction and film.	Natural hazards and social development, climate change		"Nature and disaster in Murakami Haruki's after the quake." <i>Ecocriticism and Japan</i> , Hisaaki Wake et. al., eds. Lexington Books (2018): 139-155.

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
East Asian Studies	Bender	Shawn					
Economics	Jiang	Ye		My current research mainly applies modern econometric methods to empirically study issues closely related to social inequality and economic development in both China and the United States including China's hukou-based inequality, macroeconomic shocks and the bottom workers in domestic labor markets, and households' future fertility decisions and labor market entry conditions. Most of my research work focuses on some vulnerable groups in the society including China's rural-urban migrants, displaced workers, obese workers, women, and the elderly group with a goal of figuring out changes in their labor market/livelihood outcomes when facing discrimination, and exogenous macroeconomic or policy shocks. Motivated by real economic issues and established upon professional research designs, my work aims to complement existing literature and help policymakers design effective public policies related to sustainability.	China's hukou-based inequality, macroeconomic shocks and the bottom workers in domestic labor markets, and households' future fertility decisions and labor market entry conditions	Dickinson students	
Economics	Kongar	Ebru	WGSS	Gender equality is Sustainable Development Goal (SDG) 5 and Reduced inequalities is SDG 10. My work focuses on inequalities by gender through an <u>intersectional feminist lens</u> .	Disproportionate care work burden of married mothers compared to their male counterparts.	Other institutions	
Economics	Singh	Sam		Power reliability interruption (Electrical power interruption) addresses sustainability by ensuring a reliable and consistent energy supply, which is crucial for the long-term well-being of society and the environment through economic growth. There are numerous ways to state that power reliability is connected to sustainability. Firstly, Power reliability is essential for basic human health, communication, and education needs. Interruption in the power supply can negatively affect these services in the economy, which, in turn, hamper the well-being of society through slow growth of the economy because businesses and industries depend on reliable power supply, and any disruption costs the economy through less production or productivity and job disruption. So, a reliable power supply can play a vital role in the sustainability of the economy. Secondly, Power supply interruption may increase reliance on backup generators or non-renewable energy sources like fossil fuels, contributing to pollution and greenhouse gas emissions. Ensuring power reliability through sustainable energy sources that align with environmental sustainability goals is essential. Improving power reliability can be achieved through investing in robust infrastructure, innovative grid technologies, and diversified energy sources. This adoption and resilience approach makes us better equipped to handle challenges and changes, contributing to the overall sustainability of energy	Although my research paper is focussing more on US economy growth and per capita income due to power reliability interruption, but some of the sustainability challenges due to power reliability interruption are energy storage solution, climate change resilience, investment in infrastructure, and transition to renewable energy. Among these, one of the important measures is an investment in infrastructure for upgrading and maintaining power transmission and distribution systems to enhance grid resilience. These are the challenges that could minimise the dependence on power reliability or avoid power interruption.	Other countries	Bibliography details related to my research work: <ol style="list-style-type: none"> 1. Abeberese, A. B. (2017). Electricity cost and firm performance: Evidence from India. <i>Review of Economics and Statistics</i>, 99(5), 839–852. 2. Amoah, A., Ferrini, S., & Schaafsma, M. (2019). Electricity outages in Ghana: Are contingent valuation estimates valid? <i>Energy Policy</i>, 135, 110996. 3. Andersen, T. B., & Dalgaard, C.-J. (2013). Power outages and economic growth in Africa. <i>Energy Economics</i>, 38, 19–23. 4. Apergis, N., & Payne, J. E. (2010). Energy consumption and growth in South America: Evidence from a panel error correction model. <i>Energy Economics</i>, 32(6), 1421–1426. 5. Atem, B., & Hotaling, C. (2018). The effect of renewable and nonrenewable electricity generation on economic growth. <i>Energy Policy</i>, 112, 111–118. 6. Bhattacharyya, A., Yoon, S., & Hastak, M. (2021). Economic impact assessment of severe weather-induced power outages in the US. <i>Journal of Infrastructure Systems</i>, 27(4), 04021038. 7. Cole, M. A., Elliott, R. J., Occhiali, G., & Strobl, E. (2018). Power outages and firm performance in sub-Saharan Africa. <i>Journal of Development Economics</i>, 134, 150–159. 8. Diboma, B. S., & Tatietse, T. T. (2013). Power interruption costs to industries in Cameroon. <i>Energy Policy</i>, 62, 582–592. 9. Henry, D., & Ramirez-Marquez, J. E. (2016). On the impacts of power outages during hurricane

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Economics	Tynan	Nicky		My primary research focuses on the development of piped water systems in England & Wales and, to some degree, the United States. Within the field of economic history it shows how systems were built and financed to last. It shows the extent to which they were designed to supply clean water to all and to protect water resources.	The main sustainability challenge is how to supply clean water to everyone in large, growing cities while also protecting water resources.	Dickinson students Other institutions Other disciplines Other countries	"What are the health benefits of a constant water supply? Evidence from London, 1860-1910," with Werner Troesken and Artemis Yang (17). Explorations in Economic History. July 2021. "Mapping London's Water Companies and Cholera Deaths: William Farr's 1868 data." With Tessa Cicak. The London Journal. March 2015 (with online supplements). Accepted July 2013. "Nineteenth century London water supply: Processes of innovation and improvement." Review of Austrian Economics. January 2013 (online: July 2012).
Economics	Underwood	Anthony	Data Analytics	My research focuses on the role of demographic change and urban form on household expenditures and emissions.	How to achieve the net-zero transition amidst demographic change; how work hours affect household emissions; and role of built infrastructure in household emissions.	Other institutions	The carbon implications of declining household scale economies. (2015). Ecological Economics, 116, 182-190. [with Sammy Zahran] The environmental impact of sharing: household and urban economies in CO2 emissions. (2018). Ecological Economics, 145: 137-147. [with Anders Fremstad and Sammy Zahran] Does sharing backfire? A decomposition of household and urban economies in CO2 emissions (2018). Energy Policy, 123: 404-413. [with Anders Fremstad] Work hours and CO2 emissions: Evidence from U.S. households. (2019). Review of Political Economy, 30(1):42-59. [with Anders Fremstad and Mark Paul]
Economics	Wei	Zhiyi					
Economics and International Studies	Alam	Shamma		My research is on issues related to developing countries such as food security and health issues, and thus related to the UN SDGs.	food insecurity, access to health,	Dickinson students Other countries	"Impact of Twin Lockdowns on Hunger, Labor Market Outcomes, and Household Coping Mechanisms: Evidence from Uganda" with Claus Portner and Ishraq Ahmed (submitted) "Navigating Food Price Shocks in a Pandemic: Food Insecurity and Coping Mechanisms in Burkina Faso" with Shi Xi Liu and Claus Portner (submitted)
English	Kersh	Sarah					
English	Phillips	Siobhan	Creative Writing, Food Studies	I am currently writing a novel about changing ideas of ecological conservation in relationship to a) the concept of "rewilding" and b) the history of Indigenous nations in the US.	social justice, inequality, human habitation, biodiversity		
English	Skalak	Chelsea	Medieval & Early Modern Studies, Women's, Gender & Sexuality Studies				

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Environmental Science	Strock	Kristin	Environmental Studies	My scholarship focuses on the sustainable use of water resources in the face of increasing human pressure and global environmental change. My work specifically links communities, resource managers and policy makers with the necessary ecological and biogeochemical information to effectively manage water resources to address both human and environmental needs. With funding from the Environmental Protection Agency, the US Geological Survey, the National Park Service, and National Geographic to name only a few, I've explored these issues across the United States and several Arctic nations.	As an "Explorer" with National Geographic, I study carbon cycling in the ice, rivers, and lakes of Arctic environments, such as Iceland and Greenland and how that is changing with a warming atmosphere. I'm also leading an effort to better understand toxic algae as an emerging threat in Pennsylvania waterways. This work is a collaboration with local, state, and federal partners to develop data-driven methods that allow us to better manage our freshwater resources to prevent a human health concern. I have over 20 peer-reviewed publications, nearing 1,000 citations, on a range of topics, including: the effects of extreme weather on water quality, the effects of climate change on algae in arctic lakes, predictions for how climate change will impact human-managed reservoirs versus natural lakes across the United States, and recovery from acid rain in the northeastern United States.	Dickinson students Dickinson colleagues Other institutions Other disciplines Other countries	ONGOING GRANTS: 2019 Strock, K.E. Developing High-Frequency Sensor Monitoring Tools for Managing Harmful Algal Blooms. Pennsylvania Department of Environmental Protection Growing Greener Plus Grants Program. (\$171,624.86) 2018 Strock, K.E., Hayes, N.M., Deemer, B.R. Thermal Controls on Methane Dynamics in Icelandic Lakes: In-Situ Incubations Across A Geothermal Temperature Gradient. National Geographic. (\$42,613) PEER REVIEWED PUBLICATIONS: Strock, K.E., J.E. Saros, S. McGowan, M. Edlund, D.R. Engstrom. 2019. Response of Boreal Lakes to Changing Wind Strength: Coherent Physical Changes Across Two Large Lakes but Varying Effects on Primary Producers Over the 20th Century. <i>Limnology and Oceanography</i> . 64: 2237-2251 Strock, K.E., N. Theodore, W. Gawley, A.C. Ellsworth, and J.E. Saros. 2017. Increasing dissolved organic carbon concentrations in northern boreal lakes: implications for lake water transparency and thermal structure. <i>Journal of Geophysical Research: Biogeosciences</i> . 122, doi:10.1002/2017JG003767. Strock, K.E., S.J. Nelson, S. Birkel, and J.E. Saros. 2016. Extreme weather years drive episodic changes in lake chemistry: Implications for recovery from sulfate deposition and long-term trends in dissolved organic carbon. <i>Biogeochemistry</i> . 127(2): 353 - 365
Environmental Studies	Beevers	Michael	International Studies	My scholarly work sits at the nexus of environmental change, conflict and peacebuilding. Others might say that my work deals with how environmental issues (including climate change) shape or impact national and/or human security. While "sustainability" as a term is not often utilized in my work, the underlying tenets of sustainability -- that is balancing social, economic and environmental concerns for the well being of people and places around the world -- is at the heart of what I do. Indeed, the focus on environment, conflict and peacebuilding highlights that without sustainability (and getting the balance of economic, social and environmental goals right), the risk of conflict fragility and insecurity only increases. Conversely, without peace and stability, sustainable development is impossible.	The focus on environment, conflict and peacebuilding highlights that without sustainability (and getting the balance of economic, social and environmental goals right), the risk of conflict, fragility and insecurity around the world only increases. Conversely, without peace and stability, sustainable development is impossible. As such, addressing peace and conflict dimensions of sustainability is vitally important. This has been recognized in the SDGs.	Dickinson students Other institutions Other disciplines Other countries	"Natural Resource Governance Reform and Environmental Peacebuilding," in Richard Matthew and Crystal Murphy (Eds.), <i>The Routledge Handbook of Environmental Peacebuilding</i> . New York: Routledge. (2022) "Extractive Industries and Human Security: An Overview," with Filipe Calvão, Christina Ankenbrand, Mirjam A.F. Ros-Tonen, <i>Extractive Industries and Society</i> (2021). "Natural Resource Reforms in Post-War Liberia and Sierra Leone: Contradictions and Tensions," In Abu Bakarr Bah (ed.), <i>Post-Conflict Institutional Designs: Building Peace and Democracy in Africa</i> . London: Zed Books (2019). "Environmental Pathways to Peace," In Ashok Swain and Joakim Ojendal (eds.), <i>Routledge Handbook of Environmental Conflict and Peacebuilding</i> . New York: Routledge. With Ken Conca (2018).
Environmental Studies	Benka-Coker	Wande					

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Environmental Studies	Douglas	Maggie	Food Studies	Most of my work is focused on understanding the ecology of agricultural systems to support food production while maintaining the biodiversity upon which agriculture depends. Some of my work also relates to characterizing and responding to biodiversity decline, particularly for insects.	Sustainable food production, conservation of insect biodiversity, soil conservation	Dickinson students Dickinson colleagues Other institutions Other disciplines Other countries	<p>Janousek, W., Douglas, M., Cannings, S., Clement, M., Delphia, C., Everett, J., Hatfield, R., Keinath, D. Koch, J., McCabe, L., Mola, J., Ogilvie, J., Rangwala, I., Richardson, L., Rohde, A., Strange, J., Tronstad, L., Graves, T. 2023. Recent and future declines of a historically widespread pollinator linked to climate, land cover, and pesticides. PNAS 120(5): e2211223120. https://www.pnas.org/doi/10.1073/pnas.2211223120</p> <p>Douglas, M., S. Soba, P. Baisley*, M. Kammerer, E. Lonsdorf, and C. Grozinger. 2022. Putting pesticides on the map for pollinator research and conservation. Scientific Data 9: 571. https://doi.org/10.1038/s41597-022-01584-z</p> <p>Douglas, M., D. Sponsler, E. Lonsdorf, and C. Grozinger. 2020. County-level analysis reveals a rapidly shifting landscape of insecticide hazard to honey bees (<i>Apis mellifera</i>) on US farmland. Scientific Reports 10: 797. https://doi.org/10.1038/s41598-019-57225-w</p> <p>Sponsler, D., C. Grozinger, C. Hitaj, M. Rundlof, C. Botias, A. Code, E. Lonsdorf, A. Melathopoulos, D. Smith, S. Suryanarayanan, W. Thogmartin, N. Williams, M. Zhang, and M. Douglas. 2019. Pesticides and pollinators: a socioecological synthesis. Science of the Total Environment</p>
Environmental Studies	Van Fleet	Kim		My current research is examining Baird's Birds: Past, Present, and Future which is focused upon changes in bird species abundances, distributions and demographics in response to the multitude of anthropogenic impacts to the environments of Cumberland County since Spencer Fullerton Baird's time in Carlisle, PA. I'm currently looking at land use changes across that period of time as well as taking into consideration the impacts of climate change. The hope is compile as much historical information as possible, analyze the data that I've been able to gather, and take the results and conclusions of the research to help inform others of more sustainable ways in which lands, wildlife and the environments/habitats they're dependent upon can be managed better to benefit birds, other wildlife and people alike. Data collected thus far includes records of Baird's original collections from Carlisle, communications between Baird and other Ornithologists of his time, Edward Snively Frey's Centennial Check-list of the Birds of Cumberland County, Pennsylvania and her Borders 1840-1943, data from the 2nd Pennsylvania Breeding Bird Atlases, eBird, along with my personal field notes and observations.		Dickinson students	

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Environmental Studies & Science	Decker	Allyssa		I am currently assessing the soil-plant-water relations in green roof systems to better improve the design, implementation, and management of green roofs. These projects address sustainability because we make a conscious effort to keep the carbon footprint of the green roofs on campus as low as possible through utilizing local materials and products. We also use native plant species on the green roof to help support biodiversity of our local ecosystems.	In my green roof research, the main goal is to better understand how these systems function so we can ensure we are providing green spaces to the community that will be self-sufficient and can maintain longevity for long periods of time. This work is aiming to promote more sustainable and resilient communities while also maintaining environmental functions in our urban system by supporting urban biodiversity.	Dickinson students Other institutions Other disciplines	
French and Francophone Studies	Duperron	Lucile		<p>In 2023, I published research in the field of modern languages critical pedagogy, which addresses Goal 4 "quality education" and Target 4.7 on the U.N. sustainability goals: "All learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through ... promotion of ... global citizenship and appreciation of cultural diversity."</p> <p>In terms of my broader scholarly activities, I developed the French department's first sustainability-connected course in 2012, as a summer immersion program in Toulouse, France, to provide a global context for sustainability studies at Dickinson. This paved the way for the development of more programming on the theme of sustainability in my home department, including the strategic hire of an accomplished faculty member specializing in environmental humanities in 2018.</p>	<p>From a critical sociolinguistic perspective, the vernacular use of the term "multilingualism" reduces the use of two or multiple languages to a socially neutral fact. In response to this theoretical inaccuracy, Scholar Ingrid Piller coins the phrase "linguistic diversity" as a critically inclusive concept that recognizes that inequalities can develop in linguistically diverse communities because of the hierarchical position of some languages over others in "local language pyramids" (Piller, 2016: 14). Although multilingualism is indeed a universal and historically ubiquitous phenomenon, the concept of linguistic diversity captures both this dimension as well as the role of "stratification" among languages that leads to issues of social justice since "the language practices of those who are disadvantaged in other ways—because of their legal status, their gender, their race, or their class—are usually the ways of speaking that are the least valued, and language thus becomes one aspect of cumulative disadvantage in diverse societies" (Piller 2016: 14).</p>	Other countries	<p>Duperron, L. (2023). "From Babble to Babel: Leveraging Multilingualism in our Communities at Home and Abroad." In Derek Hird (Ed.), <i>Transform the Modern Languages Classroom! A Critical Modern Languages Pedagogy</i>. London, UK: Bloomsbury Press.</p> <p>Duperron, L. (2012). "Cultivating The SCs during study abroad: Test-casing sustainability." American Council for the Teaching of Foreign Languages (ACTFL) National Convention, Philadelphia, November 18, 2012.</p>

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
French and Francophone Studies	Roman	Hanna	Medieval and Early Modern Studies	My research focuses on the history of environment in Enlightenment France. I study how nature and climate were perceived, and especially how people reacted to fears about destruction of nature and climate change and how they thought humans might or might not survive them.	- The origins and influences on current Western mentalities towards climate and sustainability and how these have contributed to the treatment of nature and to the current climate crisis. - What climate, sustainability, nature, environment, etc. meant in the past and how these words have changed over time. - The importance of studying past thought, mentality, behavior, philosophy in order.	Dickinson students Other institutions Other countries	- Article, "The Disappearing Ocean: Imaginaries of Expanding Coastlines and Falling Sea Levels in Enlightenment France," currently under review with Eighteenth-Century Studies. - Article, "'Au sein d'un océan de ténèbres . . .': Jean-Sylvain Bailly's Atlantis and Anxieties of European Origins in the Enlightenment," The Eighteenth Century: Theory and Interpretation (forthcoming in volume 63.3/4, Spring 2024). - Book Chapter, "Knowledge of the Ocean: From Natural Theology to Natural History," The Cultural History of the Sea: The Long Eighteenth Century (1650-1820), Vol. 4, Jonathan Lamb, Ed. (London: Bloomsbury Academic Press, 2021). - Book Chapter, "The Logic of the Invisible: Perceiving the Submarine World in French Enlightenment Geography," in The Aesthetics of the Undersea, Margaret Cohen and Killian Quigley, Eds. London: Routledge Environmental Humanities Series, 2019. - Article, "Buffon's Language of Heat and the Science of Natural History," Studies in Eighteenth-Century Culture, Vol. 48 (2019), 187-205. - Book, The Invention of Nature in Buffon's Histoire naturelle. Oxford University Studies in the Enlightenment series, Liverpool University Press, October 2018. - A number of book reviews on current works related to natural history and sustainability in the Enlightenment.
French and Francophone Studies	Soldin	Adeline	Women's, Gender & Sexuality Studies; Food Studies	Some of my work looks at gender inequalities and racial discrimination, which relate to the UN SDGs.	Historical justifications for gender and racial discrimination.		
French and Francophone Studies, Women's, Gender & Sexuality Studies	Rebeiz	Mireille	Middle East Studies	My research focuses primarily on issues of social justice and inequality. In general, I examine the intersectionality of gender, race and trauma in armed conflicts with focus on the Middle East and North Africa. Some of my work examines issues of sustainable peace and terrorism in the Middle East.	- Access to materials in foreign languages (Arabic or French); - Limited funds to travel for research and archival work in the Global South (for instance, the same amount is allocated whether one is traveling to France or Lebanon knowing that the costs of travel for research are different) - Limited funds available to publish work on the Global South - Some journals/publishers are only interested in the Global North and have a eurocentric approach to sustainability	Dickinson students Dickinson colleagues Other institutions Other disciplines Other countries	The State of Hezbollah. Edinburgh University Press. Under Review, 2024-2025. ☐ Gendering Civil War: Francophone Women's Writing in Lebanon. Edinburgh University Press, 2022. Nominated for the John Leonard Prize – the National Book Critics Circle Awards. "The Israel – Lebanon Maritime Border Agreement and the Issue of Statehood: Does Lebanon Recognize the State of Israel?" Dickinson Law Review, vol. 128, no.1, 2023, pp. 197-231. "We, Arab Americans, are not Ok." PennLive, 8 November 2023. "Do I look White to You?" Introduction to Women's, Gender, and Sexuality Studies. Interdisciplinary and Intersectional Approaches, edited by L.Ayu Saraswati, Barbara L. Shaw, Heather Relihan, Oxford University Press. Forthcoming, 2024.

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Geosciences	Edwards	Ben	Environmental Sciences, Latinx & Caribbean Studies	<p>Almost all of my field research is directly related to understanding earth's climate past and future. This includes work in glaciology and paleoclimatology, both of which are directly related to UN Sustainability Goals 11, 13, 14 and 15. I also use GIS and remote sensing in my research, which is linked to UNSGs 1, 9, 13-15. I have been interviewed in a variety of news media about science outreach and communication, both of which tie to UNSGs 4,5,7,10, 13-15. My direct research in physical volcanology also touches on geohazard mitigation, which are parts of UNSGs 1, 9, 11, 13-15.</p>	Rates of glacier change in Peru, Iceland and the Canadian Arctic. Paleoclimatology in North America, Iceland, Peru and Chile. Hazards from future eruptions at glacierized volcanoes around the world (generated global database).	Dickinson students Dickinson colleagues Other institutions Other disciplines Other countries	<p>Russell, J.K., Edwards, B.R., Williams-Jones, G., Hickson, C.J. 2023. Pleistocene to Holocene volcanism in the Canadian Cordillera. <i>Canadian Journal of Earth Sciences</i>, 60, https://doi.org/10.1139/cjes-2023-006.</p> <p>Waythomas, C., Edwards, B.R., Miller, T.P., McGimsey, R.G. 2022. Lava-ice interactions during historical eruptions of Mount Veniaminof Volcano, Alaska and the potential for meltwater floods and lahars. <i>Natural Hazards</i> (NHAZ-D-21-01661).</p> <p>Edwards, B.R., Russell, J.K., Pollock, M. 2022. Cryospheric forcing on volcano-magmatic systems. <i>Frontiers in Earth Sciences</i>, v.10, https://doi.org/10.3389/feart.2022.871951.</p> <p>Curley, A., Kochtitzky, W., Edwards, B., Copland, L. 2021. Glacier changes over the past 144 years at Alexandra Fiord, Ellesmere Island, Canada. <i>Journal of Glaciology</i>, 67, 511-22.</p> <p>Edwards, B.R., Kochtitzky, W.H., Battersby, S. 2020. Global mapping of future glaciovolcanism, <i>Global and Planetary Change</i>, 195, Article 103356, 16p.</p> <p>Kochtitzky, W.H., Edwards, B.R., Enderlin, E.M., Moreno, J., Marinque, N. 2018. Improved estimates of glacier change rates at Nevado Corupuna Ice Cap, Peru. <i>Journal of Glaciology</i>, v. 64, 175-84. https://doi.org/10.1017/jog.2018.2.</p>
Geosciences	Hayes	Jorden		<p>I research how rock at depth transforms toward the surface into soil and weathered rock that sustains life at the surface. This research has implications for how nutrients are released from rock for use by plants, how water is stored and transported in the subsurface, and how climate and geologic forces will impact these processes in the future. I primarily use geophysical methods in this research.</p> <p>I also use geophysical methods for local projects that work to increase representation of marginalized groups in the geosciences and help communities reclaim their histories (e.g., the Mount Tabor Cemetery Project).</p>	Clean water, reduced inequalities, climate action, life on land	Dickinson students Dickinson colleagues Other institutions Other disciplines Other countries	<p>Callahan, R., C.S. Riebe, L.S. Sklar, S. Pasquet, K.L. Ferrier, W.J. Hahn, N.J. Taylor, D. Grana, B.A. Flinchum, J.L. Hayes, W.S. Holbrook, (2022), Forest vulnerability to drought controlled by bedrock composition, <i>Nature Geoscience</i>, doi: 10.1038/s41561-022-01012-2</p> <p>Pasquet, S., J. Marçais, J.L. Hayes, P. Sak, L. Ma, J. Gaillardet, (2022), Geophysical imaging of the deep critical zone architecture reveals the complex interplay between hydrological and weathering processes in a volcanic tropical catchment, <i>Geophysical Research Letters</i>, doi:10.1029/2022GL098433</p> <p>Hayes, J.L., C.S. Riebe, W.S. Holbrook, B.A. Flinchum, and P.C. Hartsough, (2019), Porosity production in weathered rock: Where volumetric strain dominates over chemical mass loss, <i>Science Advances</i>. doi: 10.1126/sciadv.aaa0834</p> <p>Flinchum, B.A., W.S. Holbrook, D. Grana, A.D. Parsekian, B.J. Carr, J.L. Hayes, J. Jiao, (2018), Estimating the water holding capacity of the critical zone using geophysics, <i>Hydrological Processes</i>, 32, doi: 10.1002/hyp.13260</p> <p>Keating, K., J.L. Hayes, G. Mount, J. Nyquist, S. Brantley, A. Gates, E. Altermatt, K. O'Connell, E. Iverson, (in preparation), GNOMES: a short-term critical zone geophysics program to recruit, retain, and foster community for minoritized early undergraduates in geosciences. <i>Journal of Geoscience Education</i></p> <p>Hayes, J.L., D.A. Tarzona*, L. Varner, (in preparation) Reclaiming lost histories through the use of 3D GPR surveys in Mount Holly</p>

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed	Scholarly Outputs
Geosciences	Sak	Peter	Environmental Science, Latin American, Latinx & Caribbean Studies	A facet of my research focuses on the weathering of silicate minerals. The weathering of silicate minerals draws down atmospheric CO2 concentrations (over geologic timescales).		Dickinson students 38 Pasquet, S., Marçais, J., Hayes, J.L., Sak, P.B., Ma, L., and Gaillardet, J., 2022. Catchment-scale architecture of the deep critical zone revealed by seismic imaging: Geophysical Research Letters, 49, e2022GL098433. https://doi.org/10.1029/2022GRL098433 . 37 Sak, P.B., 2021. Weathering Rinds as Tools for Constraining Reaction Kinetics and Duration of Weathering at the Clast Scale in Hydrogeology, Chemical Weathering, and Soil Formation: A.G. Hunt et al. (Eds.) Hydrogeology, chemical weathering, and soil formation Geophysical Monograph Series v. 257, p. 242-261. 34 Guo, J., Ma, L., Gaillardet, J., Sak, P.B., Pereyra, Y., and Engel, J., 2019. Reconciling chemical weathering rates across scales: Application of uranium-series isotope systematics in volcanic weathering clasts from Basse-Terre Island (French Guadeloupe): Earth and Planetary Science Letters, v. 530, p. 33 Ma, L., Dosseto, A., Gaillardet, J., Sak, P.B., and Brantley S.L., 2019. Quantifying weathering rind formation rates by in situ measurements of U-series isotopes with laser ablation and inductively coupled plasma-mass spectrometry: Geochemica et Cosmochemica Acta: v. 247, p. 1-26. 32 Sak, P.B., Murphy, M., Ma, L., Gaillardet, J., Herndon, E.M., Brantley, S.L., and Daniel, C., 2018. From unweathered core to regolith: rates and trends of in situ chemical weathering on a tropical volcanic island (Basse Terre Island, French Guadeloupe): Chemical Geology, v. 498, p. 17-30.
Geosciences	Thibodeau	Alyson		Some of my scholarly work examine the distribution of trace metals (e.g., mercury, lead) and attempts to trace their sources.		Dickinson students Dickinson colleagues Other institutions Thibodeau, A.M., Curley, A.N. *, Bonsey, K. *, Barber, D.C., and Strock K.E., (2020) Investigation of mercury burial in two small lakes undergoing browning in northeastern Pennsylvania. Paper presented at 2020 Northeastern/Southwestern GSA Joint Meeting (cancelled due to COVID-19). Barber, D., Wu, E., Thibodeau, A.M., (2018) Standard salt marsh field sampling techniques provide reproducible patterns of total mercury accumulation in cores along the US East Coast. Poster presented at the 2018 American Geophysical Union Fall Meeting, Washington D.C. Bonsey, K. *, Curley, A.L. *, Strock, K.E., Thibodeau, A.M., Investigation of lead isotopes and trace metal fluxes as particulate contaminant tracers and chronostratigraphic markers for lake sediment in northeastern Pennsylvania. Poster presented at the 2018 Geological Society of America Annual Meeting, Indianapolis, IN.
German	Haque	Kamaal	Film & Media Studies	I have published articles using ecocritical approaches to a novel and to films. In general, I research film and literature set in the Alps. By definition, the mountain setting lends itself to sustainability questions. I am the co-editor of a forthcoming volume on global mountain cinema that has the environments as one of four parts as its structure.	I have published on landslides and mining in literature. I have published on water scarcity as represented in film.	Other institutions Other countries 1) "Franz Hohler's Die Steinflut and the Lessons of Man-Made Ecological Catastrophe." Gegenwartsliteratur 19 (2020): 271-289. 2) "Leni Riefenstahl's Ecological Mountain Films" Global Mountain Cinema. Edinburgh: Edinburgh U P. Under Review. 3) Global Mountain Cinema. Eds. Kamaal Haque, Christian Quendler and Caroline Schaumann. Edinburgh: Edinburgh U P, 2024. Under Review.

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
German	Pfannkuchen	Antje	Film and Media Studies, Environmental Humanities	My new research addresses the history of sustainability and of the environment more broadly. A specific interest of mine is the study of energy and its role as an environmental and sustainability factor.	My work is focused on understanding the history of thinking about the environment and environmental problems, specifically in Europe, but also comparatively.	Dickinson colleagues Other disciplines Other countries	
History	Bilodeau	Christopher	Medieval & Early Modern Studies; Native Studies	Mostly in comparison between Native American and European/American norms toward the environment. Both groups had visions, historically, of what was sustainable and what was not (it was not Indians=sustainable, and Europeans=not sustainable.). But the comparisons with land use and environmental engagement are helpful for students in attempting to think through the ways peoples of the past lived.	I understand "sustainability challenges" within an historical context; I only highlight how suggestive the history might be for us today. But: land use generally; how notions of property affected land use in the past; treatment of elements of the environment within animist societies; what a philosophy of animism does to environmental relations between spirits and natives, and what a non-animist vision of the world means for the treatment of an environment.	Dickinson students Dickinson colleagues	
History	Borges	Marcelo	Latin American, Latinx & Caribbean Studies	My recent scholarly work included a collective project that resulted in a two-volume publication titled The Cambridge History of Global Migrations (2023). I was the co-editor of the volume focusing on modern migrations (after 1800). Sustainability, broadly understood, is part of the overall coverage of this volume which considers the many factors leading to mobility and migration around the world and the tensions and changes resulting from such mobility.		Other institutions Other disciplines Other countries	The Cambridge History of Global Migrations, Vol. 2, Migrations 1800-Present (co-editor with Madeline Y. Hsu; General Editor, Donna Gabaccia). Cambridge, UK: Cambridge University Press, 2023.
History	Pawley	Emily	Food Studies, contributing faculty Environmental Studies	My current project is a collaboratively written guide for historians who are interested in responding to the climate crisis. My next solo research project will be a history of ecological restoration and carbon sequestration.	Climate change	Dickinson students Other institutions Other disciplines Other countries	
History	Sweeney	Regina	Medieval and Early Modern Studies; Women, Gender and Sexuality Studies; International Studies	I deal with environmental effects of war And I deal with debates around consumption in the 19th and early 20th c.		Dickinson students Other institutions	
International Business & Management	Mansell	Wade		One of the topics that I study is consumer product disposal and reuse.	My work looks at how product design can encourage pro-environmental product use and disposal.	Other countries	

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
International Business & Management	Watson	Forrest		<p>In one of my most recent publications- Mark Peterson, Watson, and Walid J. Abou-Khalil (2023), "Explaining Consumer Support for Sustainable Business Practices in the Frontier Market of Lebanon," Journal of Macromarketing- we studied consumer's attitudes about sustainable business practices. Another recent publication is about the sustainability possibilities of remote work: Ayşe İrem Erdoğan and Watson (2023), "Millennials' Changing Mobility Preferences: A Telecommuting Case in Istanbul," Journal of Consumer Behavior. I am also working consistently on how to incorporate sustainability into marketing pedagogy:</p> <ul style="list-style-type: none"> • Watson and Julie Stanton, Stefanie Beninger, Christine Domegan, Alexander Reppel, Stanley Shapiro (2021), "Teaching what Society Needs: "Hacking" an Introductory Marketing Course with Sustainability and Macromarketing," Journal of Marketing Education. • Stanley Shapiro, Stefanie Beninger, Christine Domegan, Alexander Reppel, Julie Stanton and Watson (2021), "Macromarketing Pedagogy: Empowering Students to Achieve a Sustainable World," Journal of Macromarketing. 	Views of sustainable practices in emerging markets, Sustainability issues related to megacities, how to teach the next generation about sustainability	Dickinson students Dickinson colleagues Other institutions Other disciplines Other countries	<ul style="list-style-type: none"> • Mark Peterson, Watson, and Walid J. Abou-Khalil (2023), "Explaining Consumer Support for Sustainable Business Practices in the Frontier Market of Lebanon," Journal of Macromarketing. • Ayşe İrem Erdoğan and Watson (2023), "Millennials' Changing Mobility Preferences: A Telecommuting Case in Istanbul," Journal of Consumer Behavior. • Watson and Julie Stanton, Stefanie Beninger, Christine Domegan, Alexander Reppel, Stanley Shapiro (2021), "Teaching what Society Needs: "Hacking" an Introductory Marketing Course with Sustainability and Macromarketing," Journal of Marketing Education. • Stanley Shapiro, Stefanie Beninger, Christine Domegan, Alexander Reppel, Julie Stanton and Watson (2021), "Macromarketing Pedagogy: Empowering Students to Achieve a Sustainable World," Journal of Macromarketing.
Italian	Trazzi	Luca	Food Studies	<ul style="list-style-type: none"> - Participation in a summer program as independent scholar (sponsored by Center for Sustainability Education and Research & Development Committee: Food Studies with independent research project). - Participation as a speaker/presenter at several conferences (Food Studies Conference Food and Politics, University of Bologna / Food Studies Conference Cuisine, Society, and Politics, University of Bologna / AASHE Advancement of Sustainability in Higher Education, San Antonio, TX / Sixth International Conference on Food Studies, University of California at Berkeley, CA) - Facilitate and coordinate two students' honors thesis related to sustainability. - Participation in Valley & Ridge, Dickinson College, to develop a new course with hands-on experience at the Dickinson College Farm as well as at the local farmers' market, and targeted exercises to assess competencies and dispositions related to sustainability. Experiential assignments are followed by written reflection and/or in-class presentations that will allow students to critically think about sustainability while using a foreign language to deliver contents. The outcome was a redesigned intermediate Italian course with Sustainability Connections (SCON) which can count as the Sustainability general degree requirement at Dickinson. - Develop courses: a Globally Integrated Course for Intermediate Italian focused on sustainability, urban 	The necessity to travel to destination to engage with local expert and to prepare hands-on and experiential activities for the students.	Dickinson students Dickinson colleagues Other institutions Other countries	

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Mathematics	Tesman	Barry		My book, Applied Combinatorics, as the name implies, covers a wide array of applications. Many of the the applications are related to sustainability issues.	Efficient ways to visit a collection of cities. Optimal location for a distribution center. Applications of block designs. Efficient ways to remove snow from city streets.	Other countries	Applied Combinatorics by F. S. Roberts and B. A. Tesman, CRC Press
Mathematics and Computer Science	Forrester	Dick	Data Analytics	I have a publication and an encyclopedia chapter that discusses the use of integer programming to determine crop rotations for organic farming. Crop rotation is an important component of organic farming because it can help to maintain healthy soil and provide weed and pest control without the use of synthetic fertilizers or pesticides.	The determination of optimal crop rotations for organic farming.	Dickinson students Dickinson colleagues	Forrester, R., "Crop Rotation Modeling," In: Encyclopedia of Optimization, Pardalos, P.M., Prokopyev, O.A. (eds), Springer, 2023. Forrester, R., and M. Rodriguez, "An Integer Programming Approach to Crop Rotation Planning at an Organic Farm," UMAP Journal, Vol. 29, No. 1, pp 5-25, 2018.
Medieval & Early Modern Studies	Abu Shuleh	Mohammad	Arabic			Dickinson students	
Music	Blyth	Jennifer		I am an artist and center sustainability in programming where appropriate.	Water conservation, Deforestation	Dickinson students Dickinson colleagues	I have shared recitals with faculty and students based around sustainability programming.
Music	Gray	Ellen	Women's, Gender & Sexuality Studies, Spanish and Portuguese, cross-list with anthro				
Music	Martin	James		My work encompasses preserving and uplifting the works of Black American Composers and Musicians, including folk songs and spirituals. This includes recording the works for posterity sake, as well as introducing it to a wider audience. In addition, i preserve and record stylistic interpretations of the works and their histories. I also take my work into communities of color and predominantly white spaces for educational purposes. I work with younger audiences of black and brown populations teaching them arts and arts-related issues through active participation in creative ways to contribute to their communities. For example, I have started a creative arts day camp for under-served inner city youth in Jackson, MS and will present a community opera in Carlisle, PA.	There is difficulty in finding and securing the works that have not been published. In community-building there are never enough sources for funding. It is especially challenging to find public funding if you work through churches, which are where black and brown peoples find trusting relationships. The schism that exists there feels like an intentional black to keep funding from getting to the right sources IMHO.	Dickinson students Dickinson colleagues Other institutions Other disciplines	RECORDINGS Wake Up Singin'!: A Copland House Celebration of Art Songs, Hymns, & Spirituals by African-American Composers Copland House Blend Records (Released November 2013) James Martin, baritone Michael Boriskin, piano George Walker: Great American Chamber Music Albany Records (Released January 2009) Featured Soloist with Dr. George Walker (Pulitzer Prize winner) at the piano Serenader: Songs and a Sonata by Celius Dougherty Published by Dougherty Foundation (Released 2003) Featured Soloist "Wide As Heaven: A Century of Song by Black American Composers" projected March, 2024 James Martin, baritone & Lynn Raley, piano New World Records William Grant Still Traveling Exhibit: Inspired to Inspiring (Opened March 2009) Artistic Consultant and Associate Editor in conjunction with MS Arts Commission and MGS Music The exhibit will be seen around the state of MS and was hosted at Millsaps College for 3 weeks in July 2009. Lecture recital/talk at the Tupelo Public Library (March 2009) Founder of DayStars Creative & Performing Arts Camp (2014 -

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Music	Pound	Robert	Medieval & Early Modern Studies, Religion	I am extending the life of two of my compositions by commissioning two stop-motion animation films for them. creation fables (28 minutes), commissioned and premiered by members of the Timaeus Ensemble in 2005, focuses on humanity in relation to our environment. the film proposes to mitigate the omnipresent, monolithic media wash of information, impossible to ignore and almost as hard to filter, by vivifying, exploring, and elucidating these contemporary environmental challenges through whimsy and fantasy, letting us examine often harsh realities through fanciful aesthetic play.	Climate change, sustainability, environmental degradation	Other institutions	Pound, Robert. creation fables, trio for flute, cello, and piano, n.p., 2005.
Philosophy	Maher	Chauncey	Data Analytics	I have published articles on the question of whether current plant physiology provides grounds for thinking that plants are conscious. This is related to the generic topic of sustainability because it bears directly on the question of the moral status of plants, and how we morally should treat them.	If plants are conscious, then we might need to treat them as more than instrumentally valuable, things that are valuable solely because they serve our interests.	Dickinson colleagues	
Physics & Astronomy	Pfister	Hans	Environmental Science	I have designed, developed, built, and tested several Solar Air Heaters (SAHs) and numerous absorbers for SAHs with various flow configurations. I have obtained solar to thermal energy conversion efficiencies of over 80%. Over the next few decades, SAHs will play a major role in the heating (and climate control) of buildings. Their high conversion efficiencies make them particularly suitable for this purpose. To increase energy efficiency in the heating and cooling of buildings I have designed, build, and tested a thermal storage device (based on Phase Change Materials, PCMs) that stores thermal energy when I room is too warm and releases the stored energy when the room is too cold. This reduces the amount of heating and cooling that is otherwise required by means of, e.g., a heat pump.	Presently, the greatest deficiency of a Solar Air Heater (SAH) is its thermal energy loss through its glazing. To this end I have developed a strategy that reduces glazing loss to about 1/4 of its original loss. The approach is applicable to all SAHs with double glazing	Dickinson students Dickinson colleagues	"A Novel Gridded Solar Air Heater and an Investigation of its Conversion Efficiency," Hans Pfister, Tyler Ralston '15, and Sung Woo Kim '13. Solar Energy, 136 (2016) 560-570.
Political Science	Reiner	Toby		In my book project on community, I consider the challenge that climate change/crisis poses to <u>political community today</u> .			
Political Science	Jacobs	Rachel	International studies	My work addresses issues of social justice and some builds on research on natural disasters.	Primarily social justice issues, particularly around crises like conflict and (man-made) famine, as well as access to rights.	Other institutions	

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Political Science	Mitchell	Kristine	International Studies	My current area of research relates to inequality and social justice in a migrant community in West London West London.	inequality, social justice	Dickinson students Other institutions Other disciplines	<p>Student-faculty research projects</p> <p>With Harpreet Chohan, Southall Oral History Project: Migrants' Experiences in their Own Words (Spring, Summer, and Fall 2022)</p> <p>With Sadie Fowler, "Building 'Little Punjab' in West London? Southall Migrants' Experiences in their Own Words" (Summer 2021)</p> <p>Research article: "Whose Southall? The Ethnic Dynamics of Territoriality in a West London Community (1954-1981)" (co-authored with Olivier Esteves, University of Lille, France, under review at Journal of Social History)</p> <p>Curated creative work</p> <p>Southall, 23 April 1979 – a contribution to the collaborative Ealing Rises Up project co-sponsored by the National Portrait Gallery and the Ealing Local History Centre. Exhibited at the Gunnersbury Park Museum, in West London, from November 30, 2021 to July 1, 2022 and now part of the permanent collection of the National Portrait Gallery (London).</p> <p>Conference papers and invited talks</p> <p>"The Road to Ethnic Diversity in Southall" invited talk for the Ealing Rises Up project co-sponsored by the National Portrait Gallery and the Ealing Local History Centre (May 2021, virtual)</p> <p>"Social Movements and Community Organizations in Southall Race Relations" invited talk at Centre d'Études et de Recherches Administratives, Politiques et Sociales, University of Lille, Lille France (scheduled for May 2020, cancelled due to the pandemic).</p>
Psychology	Guardino	Christine	Health Studies	My research program applies insights from psychological science to understanding disparities in maternal and child health. I focus on the physiological and behavioral pathways through which chronic stress affects health, and the role that stress processes play in the disproportionate burden of adverse outcomes experienced by marginalized populations. This work relates to SDGs including reduced inequalities and promoting good health and well-being.		Dickinson students Other institutions Other disciplines	

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Psychology	Helweg-Larsen	Marie		I have examined COVID-related behaviors such as mask-wearing and vaccine intentions (3 recent papers) I have also examined how people experience stigmas (focusing mostly on the stigmatization of smokers) including the role that culture, gender, and socioeconomic status play in the experiences and consequences of stigmatization.	I do not recall what they were specifically and the survey does not allow me to go back to the first page.	Dickinson students Other countries	precautions?: The role of worry, perceived risk, and governmental trust. Social and Personality Psychology Compass, 17(11), e12873, 1-12. http://doi.org/10.1111/spc3.12873 Helweg-Larsen, M., Peterson, L. M., & DiMuccio, S. H. (2022). The interplay between cognitive and affective risks in predicting COVID-19 precautions: A longitudinal representative study of Americans. Psychology and Health, 37(12), 1565-1583. https://doi.org/10.1080/08870446.2022.2060979 Peterson, L.M., Helweg-Larsen, M., & DiMuccio, S.H. (2021). Descriptive norms and prototypes predict coronavirus prevention cognitions and behaviors in the United States: Applying the prototype willingness model to pandemic mitigation. Annals of Behavioral Medicine, 55(11), 1089-1103. https://doi.org/10.1093/abm/kaab075 Helweg-Larsen, M. & *Tjitra, C. (2021). Does ostracism help smokers quit? Stigma and Health. https://doi.org/10.1037/sah0000304 Helweg-Larsen, M., *Pyakuryal, M., & Pisinger, C. (2020). Reminders of a stigmatized status might help smokers quit. Stigma and Health, 5(3), 273-283. https://doi.org/10.1037/sah0000197 Helweg-Larsen, M., *Sorgen, L., & Pisinger, C. (2019). Does it help smokers if we stigmatize them?: A test of the stigma-induced identity threat model among U.S. and Danish smokers. Social Cognition, 37(3), 294-313. https://doi.org/10.1521/soco.2019.37.3.294
Russian	Duzs	Elena	Film Studies	By studying literature and film dealing with sustainability issues		Dickinson students	
Spanish	Past	Mariana		Some of my scholarly work addresses issues of social justice and economic equality within the profession	Equity for female faculty and faculty from underrepresented groups	Other institutions Other disciplines Other countries	
Spanish and Portuguese	Castellanos	Carolina	Latin American, Latinx & Caribbean Studies; Africana Studies	I analyze literature and films using a decolonial feminist/gender/queer studies perspective. As such, I engage with topics related to social justice and inequalities, more specifically the (mis)representation of minorities.	gender equality (representation of women and transwomen)	Dickinson students	1. Blind peer-reviewed article: "Love that Dares Speak its Femininity: Trans* Representation in Brazilian Cinema." Studies in Spanish and Latin American Cinemas. Forthcoming. 2. Blind peer-reviewed article: "Samantha Valdés y la bisexualidad en las novelas de Éimer Mendoza." Chasqui: revista de literatura latinoamericana, vol. 51, no. 1, 2022, pp. 235-254. 3. Blind peer-reviewed article: "A Physically Powerful Woman: Luzia-Homem by Domingos Olímpio." Luso-Brazilian Review, vol. 56, no. 2, 2019, pp. 20-41.
Spanish and Portuguese Studies	Arnedo	Asuncion	Food Studies				

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed	Scholarly Outputs
Spanish and Portuguese Studies	Copeland	Eva			My work addresses questions of race, gender, and sexuality in modern and contemporary Spain.	<p>"La madre patria: Domesticity, Empire, and the Affective in Eva Canel's <i>El agua turbia</i> (1899)" Revise and resubmit at <i>Hispanic Review</i> as of Dec. 2023.</p> <p>"Afro-Spanish Countervisual Genealogies of Blackness in Rubén H. Bermúdez's <i>Y tú, ¿por qué eres negro?</i>" Accepted at <i>Journal of the African Literature Association</i> (JALA). Forthcoming in 2024.</p> <p>"On Blackness and Belonging in Contemporary Spain: Desirée Belalobedde's <i>Ser mujer negra en España</i>." <i>Hispania</i> 105.4 (2022): 509-524. DOI:10.1353/hpn.2022.0090</p> <p>"Racialized Female Domesticity and Racial Passing in Eva Canel's <i>La mulata</i> (1891)." <i>Revista de Estudios de Género y Sexualidades/ Journal of Gender and Sexuality Studies</i>, vol. 47.2 (2021): 1-20. DOI:10.2307/48639176</p>
Spanish and Portuguese Studies	Zegarra	Allen		<p>One of my research papers, "El mal de la taiga: Una versión de la explotación de personas y recursos naturales en Latinoamérica", specifically addresses the connections between the exploitation of persons and that of natural resources in Latin America. Throughout the paper, I provide data and examples that illustrate the impact that informal and illegal exploitation of resources has made on different aspects of people's lives in Latin America.</p> <p>One of my presentations, "La casa del dolor ajeno: México y Perú en tiempos violentos", analyzes the causes and consequences of slow violence surrounding environmental issues in the Andes of Perú.</p> <p>My novel <i>Hace frío en la casa de Josefina</i> devotes many of its pages to the protection of clean water sources, sustainable mining, and the need to care for bees.</p>	<p>Illegal and informal exploitation of natural resources and their connections with the degradation of ecosystems.</p> <p>The deadly consequences of irresponsible mining practices in the Andes of Perú.</p> <p>The loopholes in the extractive industry in some Latin American countries.</p>	<p>"La casa del dolor ajeno: México y Perú en tiempos violentos" Latin American Literary Studies Association Conference</p> <p>"El mal de la taiga: Una versión de la explotación de personas y recursos naturales en Latinoamérica" Latin American Literary Review Journal, Vol. 48, no 97, 2021, pp. 59-67.</p> <p><i>Hace frío en la casa de Josefina</i> (novel) Arkabas</p>

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Sustainability	Leary	Neil		My research examines climate change risks, vulnerabilities and resilience; nitrogen footprints; carbon fees and permit trading	Climate change, food security, poverty, sustainable communities	Dickinson students Dickinson colleagues Other institutions Other disciplines Other countries	<ul style="list-style-type: none"> •Intergovernmental Panel on Climate Change (2014). N. Leary and P. Dube, review editors, Chapter 22, Africa, in Climate Change 2014: Impacts, Adaptation and Vulnerability, Working Group II volume of the Fifth Assessment Report of the IPCC. •K. Averyt, B. Hewitson, N. Leary, and J. Marengo, guest editors (2009), CR Special 20: Integrating Analysis of Regional Climate Change and Response Options, Climate Research 40, December 10, 2009. •N. Leary, C. Conde, J. Kulkarni, A. Nyong and J. Pulhin, editors (2008), Climate Change and Vulnerability. Earthscan, London. •N. Leary, J. Adejwon, V. Barros, I. Burton, J. Kulkarni and R. Lasco, editors (2008), Climate Change and Adaptation. Earthscan, London. •Intergovernmental Panel on Climate Change (2007). N. Leary and A. Magalhães, review editors, Chapter 17, Assessment of Adaptation Practices, Options, Constraints and Capacity, in Climate Change 2007: Impacts, Adaptation and Vulnerability, Working Group II volume of the Fourth Assessment Report of the IPCC. •J. McCarthy, O. Canziani, N. Leary, D. Dokken, and K. White, editors (2001), Climate Change 2001: Impacts, Adaptation and Vulnerability, Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, UK and New York, USA.
Theatre & Dance	Simpson	Keola		<p>American theatre productions, particularly at the college level, are heavily reliant on new materials and energy (power) to produce a play. The expectation of that level of single-use materials really took off in the post WW2 era of the new American theatre. This way of making theatre is young and limited, but it has become the dominate way. Teaching the history of theatre, the global history-- one that includes the indigenous art forms, teaches beyond the entertainment and focuses on the purpose as well as the "how". Theatre in its global and historical form doesn't ask for, or need all of that waste.</p> <p>All of my theatre courses highlight the "do what you can with what you have" effort that indigenous story tellers and playmakers have depended on for centuries. Building things that are meant for reuse, with care and a craft that masters teach to their apprentice.</p>	<p>Any production design for a show I direct must use what we already have. If we bring in something new, it has to be for other use other than just one production. It needs to be used for many shows over many years.</p> <p>Getting outside of the theatre and using natural or even existing man made landscapes is part of the director training I focus students on.</p> <p>Story-telling is what we do. What we tell and where we get those stories from are my area of focus. I've been deliberate with my teaching and professional work in telling the story of the land and how we can bring a voice to it. Environmental studies is the perfect fit for students to work with in this area of focus.</p> <p>We have been a wasteful art form for 80+ years. Cutting and reducing the waste has been a challenge in the past, but the new generation of students are behind this effort. They are getting behind the indigenous ways of play making now.</p>	Dickinson students Dickinson colleagues Other institutions Other disciplines Other countries	

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Theatre and Dance	Barrett	Kent		<p>I am constantly looking at where material comes from and where it goes. From looking at sustainably sourced wood production, to recycling opportunities (such as using scenic elements for houses or farm practices) after the show closes. I also work with community partners to pair up with material needs. For example, a show I completed last year required plants. So I worked with a community garden to see what kind of plants they needed, then used grow lights, soil, and those plants for the show. We then donated all of that material to the garden. Another example is a show in which we asked the farm what they needed. They responded "new greenhouse plastic" so I built the show around using their old greenhouse plastic and then spent our scenic budget on new plastic for them.</p> <p>In other ways, we're handling these issues head-on through content as well. I'm currently developing a new piece, tentatively entitled BioGas: The Musical right now with the theater company I help run in town called Valley Traction. This show will promote the current and future uses of biogas in a myriad of forms and help to provide storytelling to an industry that is difficult to find public traction easily.</p>	<p>Any one of the 17 UNSDG's has been addressed either in the content, context, or concepts used in the shows I've been working on throughout the world. I tend to still engage in international performative work and these items are more clearly and easily expressed and implemented in other countries. However, we try to engage with all of them directly here in the states too, on every production I work on.</p>	<p>Dickinson students Dickinson colleagues Other institutions Other disciplines Other countries</p>	<p>Most of the work done by Valley Traction (www.valleytraction.org) Most of the work done in collaboration with Charlotte Brathwaite (www.charlottebrathwaite.com) Most recently in Amsterdam at the Holland Festival - working with Adrienne Maree Brown to create a ritual for emergence *(based on emergent strategies) - this is going on to Puerto Rico to work with partnering organizations helping to re-build communities devastated by natural disasters By guest lecturing and teaching sustainable design practices at MICA, Wilson College, and Franklin and Marshall</p>
Theatre and Dance	Harper-McCombs	Sherry		<p>I have spent a good bit of my time, research, and development around working with natural and recycled materials. I have based entire designs around material reuse and/or use of natural materials.</p>	<p>I have attempted to address the heavy use of non-recyclable materials in my industry. I also work hard to avoid contributing to the "fast fashion" explosion by doing as much thrifting of materials and garments as possible. I address these issues with my students in an attempt to train a new generation of artists on better practices.</p>	<p>Dickinson students Dickinson colleagues Other institutions</p>	<ul style="list-style-type: none"> • Dickinson College's Center for Sustainability Education's Development Grant to support class in recycling tin cans in to art and useful objects at the John C. Campbell Folkschool, Brasstown, NC, Spring 2018. • Dickinson College's Center for Sustainability Education's Grant to support the residency of the Bread and Puppet Theater, Fall 2016. Presentations/workshops • United States Institute of Theatre Technology Conference, March 2018 Costume Commission Juried Poster Session. <ul style="list-style-type: none"> ▫ Piecing Together a Sustainable Sewing Project for Beginning Stitchers". • United States Institute of Theatre Technology Conference, March 2017 Costume Commission Juried Poster Session. <ul style="list-style-type: none"> ▫ Pulled Leather Masks over Plaster Forms". • Southeastern Theatre Conference 2017 Workshop. <ul style="list-style-type: none"> ▫ Trashy Transformation: Upcycling Unwanted Costumes and Fabrics", March 2017. • Southeastern Theatre Conference 2016 Workshop. <ul style="list-style-type: none"> ▫ Leather Up! Costume and craft work with leather", March 2016 • United States Institute of Theatre Technology Conference, April 2015 Costume Commission Juried Poster Session. <ul style="list-style-type: none"> ▫ Inexpensive Wire Frame Horseheads for Man of La Mancha" • Southeastern Theatre Conference 2015 Workshop. <ul style="list-style-type: none"> ▫ Show your Metal: Tips for working with metal in costuming, March 2015.▫ <p>It is difficult for artists to answer this because I really need to share images and videos of work which I have done onstage, which is my primary form of research.....</p>

Department	Last Name	First Name	Other Department Affiliations	Description of Scholarly Work	Sustainability Challenges Addressed		Scholarly Outputs
Women's, Gender & Sexuality Studies	Oliviero	Katie		My work considers the systems and cultures that support social sustainability for diverse groups, especially women, gender minorities, immigrants, people of color and QLGBT identified folks.	Interdisciplinarity is always time consuming and social sustainability scholarship is an inherently interdisciplinary focus.	Dickinson students	Vulnerability Politics: The Uses and Abuses of Precarity in Political Debate (NYU Press, 2018).