

American University Sustainability Research AY2022-23

Academic Department	Faculty Member	Research Topic	Research Description
Anthropology			
	Anne Claus	Sustainable seafood in Japan	This research is a multi-sited ethnography of sustainable seafoods.
	Buck Woodard	Ongoing field research with Native American communities	Every community has different needs / situations. Some are working with environmental clean up, others are making linkages to environment stewardship with language revitalization, some are concerned with cane restoration, others on river clean up and working on placing lands in conservation easements, others on oyster restoration, some on fish productivity.
Chemistry			
	Shouzhong Zou	Developing electrocatalysts for various energy and chemical applications	In this project, we develop catalysts for fuel cells and for converting organic compounds to value added compounds. Green and sustainable processes are being developed for preparing these catalysts.
	Matthew Hartings	RECIPES Grant	This research aims to study how food is wasted across the US and evaluate novel efforts for minimizing food waste. Within this project, Dr. Hartings is evaluating food waste streams at small companies in an effort to use these waste materials for generating valuable products.
	Matthew Hartings	3D printing objects for green energy	This research works on developing novel 3D-printed objects for green energy and environmental remediation applications.
	Monika Konaklieva	Synthesis of novel potentially bioactive compounds	This research works on developing methods for preparation of novel compounds by using possible green chemistry approaches.

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Critical Race, Gender & Cultural Studies			
	David Vazquez	Latinx Environmentalisms: Place, Justice, and the Decolonial	This academic book is dedicated to literary and cultural representations of environmentalism within and between Latinx cultures.
Economics			
	Claire Brunel	Green Technologies, Climate Migration, Global Supply Chains, and Pollution	This research consists of many projects about the different drivers of climate-related technologies to either mitigate or adapt to climate change, projects on how households may use migration as a way to adapt to the changing climate, and the impact of global supply chains on the distribution of production and pollution across the globe.
	Robert Koopman	Environmental goods trade and developing countries SDG and the Paris Climate Agreement goals: case studies on Kenya and Nigeria	We examine trade and tariffs on selected environmental goods that could help these countries meet their SDG and Paris commitments.
	Bernhard Gunter	Income Inequality after Episodes of Globalization and Marginalization: Global Evidence from 1980 to 2018	This research is on inequality related to globalization and marginalization at the global level.
	Mahmud Yesuf	Climate change perceptions, adaptations and impacts on food security	These are micro level studies focusing on Sub-Saharan Africa
	Walter Park	Plant Variety Protection	This research is on how IPRs affect food security.
	Alan Isaac	Determinants of Wealth Inequality	This is research on agent-based models of the evolution of wealth inequality and possible policy responses.
Environmental, Development & Health			

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	Scott Freeman	Land grabs, land use change, and climate change in Northern Haiti	This research examines the issues with land grabs and demands of climate change that affect agriculturalists in northern Haiti.
	Robin Broad	The Water Defenders: How Ordinary People Saved a Country from Corporate Greed.	This academic book focuses on the local community in El Salvador who rallied together with global allies to prevent the Pacific Rim mining company from poisoning the country's main water source.
	Angela Pashayan	Settling the Informal Settlements	This research is on sustainability for Slums and Slum-dwellers.
	Jesse Ribot	Climate of Anxiety	This research looks at how Climate Change Narratives are making African Farmers Anxious and cause migration.
	Louis Goodman	Jeju Korean Cherry Trees and World Peace: International Peace and Understanding through Bio-Diplomacy	This is historical research on Asian Cherry Trees.
	Malini Ranganathan	Climate Justice in Washington, DC	This research focuses on communities vulnerable to climate events east of the Anacostia.
	Dana Fisher	Saving Ourselves: From Climate Shocks to Climate Action	This scholarly book argues that there is a realistic path forward for climate action—but only through mass mobilization that responds to the growing severity and frequency of disastrous events. It assesses the current state of affairs and shows why public policy and private-sector efforts have been ineffective. Spurred by this lack of progress, climate activism has become increasingly confrontational. The work examines the radical flank of the climate movement: its emergence and growth, its use of direct action, and how it might evolve as the climate crisis worsens.

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	Garrett Grady-Lovelace	Towards abolitionist agrarian geographies of Kentucky	This agrarian geography of Kentucky begins on the streets of the state's largest city, in the throes of antiracist struggle. It tracks the state's lingering colonial settler power dynamics through the racism of plantation, extraction, and carceral geographies. It then traces how resistance to these exploitations take root in place-based agri-food initiatives unfolding through urban-rural solidarity against white supremacist policing, prison systems, labor exploitation, and extractivism.
	Garrett Grady-Lovelace	Agrarianizing climate accords & discord: food, agriculture & agrarian movements at UNFCCC Conference of the Parties	How do agrarian justice movements factor into the UNFCCC annual global climate Conference of the Parties (COP)? How have they appeared and erupted, been excluded, appropriated, and barely allowed – over the years, and, in particular, at the 2022 COP27 and 2023 COP28? This paper asks and begins to answer these overlooked questions. Drawing on collaborative event ethnography and policy analysis, this paper traces the contours of this improbable – yet, from the long durée vantage: foreseeable – dynamic of agrarian coalition power expanding from the marginalized majority, at COP27, COP28, and beyond.
	Ken Conca	Advanced Introduction to Water Politics	In this authoritative Advanced Introduction, Ken Conca expertly examines the fundamentals of water politics, covering poverty, health and livelihoods alongside key areas such as water law, the environment, international politics and the growing role of climate change in water governance.

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	Victoria Kiechel	Green building consulting for Arlington County	This research works towards developing an adaptation alternative path for Arlington County's Green Building Incentive Policy.
Environmental Science			
	Valentina Aquila	Urban air pollution	This research measures air pollution in DC neighborhoods.
	Karen Knee	Research on global methane cycle, water quality, extractive industries	There are multiple ongoing research projects on the global methane cycle, water quality, and extractive industries.
	Stephen MacAvoy	Siloxanes+PAHs in the Potomac and Anacostia Rivers. Climate resilience in amphipods and isopods	One project studies how organic contaminants are influenced by land use. The other is how small invertebrates will respond to climate change warming up their habitat.
	Barbara Balestra	1) Microplastics and 2) Paleoclimate studies	<p>1) Microplastic research in the Anacostia and Potomac watershed with the goal is to assess the quantity of microplastic in different environments in the DC area. Microplastic assessments are used too suggest how regulations should be focused to promote innovation of sustainable materials and promote environmental health and safety.</p> <p>2) Paleoclimate studies how we can learn from the past about climate-human-environment interactions at the present time, and in the future. The research also aims to understand how the earth system changes through the past geological periods can come only through the most rigorous reconstructions of climate, human activities, and earth processes, and their interactions, in every environment and at different scales.</p>

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	Sauleh Siddiqui	Modeling long-term projections of energy and food systems	This research uses mathematical optimization and operations research methods to project future outcomes in national-level energy and food systems. In addition, it also works to develop algorithms for systems optimization that incorporate infrastructure function, game theory and markets, and energy and environmental policies.
	Kristine Beran	RECIPES Grant	Multiscale Resilient, Equitable, and Circular Innovations with Partnership and Education Synergies (RECIPES) for Sustainable Food Systems aims to reimagine a food system that's more sustainable, equitable, and resilient.
Film & Media Arts			
	Margaret Stogner	Impact Media Research	This research is on how environmental, conservation, and science communication can engage and influence the public to take sustainable actions.
	Maya Livio	Research on environmental media and networked natures	This research centers questions about multispecies ethics and environmental justice at the overlaps of media and the environment
History			
	Anna Kaplan	Black Women's Labors as Roots of Oral History Methods and Practices at US Institutions	This project moves the narrative about the history of oral history in academia and US institutions away from a White and male focus. By centering the work of Black women, which has frequently been unrecognized in the field, this project highlights individuals who have shaped the field in crucial ways and contributed methods, practices, and frameworks from which stem current discourses about sustainability and inclusivity in oral history.
School of International Service			

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	Charles Kelly	Environment and disaster management	This research works on incorporating environmental issues to improve humanitarian assistance and reducing disaster risk.
	Judith Shapiro	China's Environmental Challenges	This academic book looks at environmental challenges facing China.
	Michael Gibbons	Systems thinking for social change and human ecology rebalancing	This research focuses on examples of human ecology education, social change education, and processes of systems analysis.
	Simon Nicholson	Carbon Removal to the Rescue?	This article looks at the current state of carbon removal approaches and some of the politics that surround them. It outlines what carbon removal is, charts some of the major challenges and controversies, and sketches some of the work needed to ensure that carbon removal developments are attentive to environmental sustainability and social justice. It also examines some of the major carbon removal options that are either in development or in discussion, starting with biological approaches and then looking at engineered options.
	Simon Nicholson	Solar geoengineering research in the global public interest	This research outlines a proposal for a global network of climate action research centers that would provide appropriate conditions to produce reliable and legitimate solar geoengineering research. The research refers to an illustrative example of a global research effort to further an international public good: the 15 CGIAR (formerly the Consultative Group on International Agricultural Research) research centers, largely based in the Global South, which have a 50-year history of agricultural research to promote food security.

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	Simon Nicholson	Survive the Century: a climate story of choice and consequences	Survive the Century is an interactive story that positions you as the senior editor of the world's most popular and trusted news organization. You have the enviable power to set the news agenda and figure out how the world should respond to climate change. This story is a work of fiction, but it is informed by real science. Each pathway in the game has been co-developed by fiction writers with natural and social scientists and climate policymakers.
	Patrick Hakizimana	Environmental Displacement and Conflict Resolution	This research works on developing a new course that focuses on understanding global displacement due to both civil conflict and climate change. In addition to material on conflict and conflict resolution, the course aims to examine climate change impacts and how those may exacerbate or create conflict.
Accounting & Taxation			
	Tharindra Ranasinghe	Firm-level economic consequences of carbon emissions	This research consists of two working papers examining how firm-level carbon emissions impact earnings management and executive compensation.
	James Potepa	Are hurricanes extraordinary or convenient for politicians? Reporting nonrecurring items in the government setting	This research examines how governments treat unusual events, including natural disasters and issues related to climate change and how they are reported in local government's financial reports.

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	Ajay Adhikari	Determinants of Integrated Reporting	The value reporting paradigm has emerged formalized now as Integrated Reporting (IR), a framework that integrates financial and non-financial information within a unique corporate report. This study explores firm and industry level determinants of IR quality in a mandatory setting (South Africa) for the period 2013-2019.
Finance & Real Estate			
	Randolph Nordby	ESG Materiality and Firm Performance	This research aims to answer the question "Do firms with high ESG scores outperform firms that have low ESG scores?"
	H. Baker	Sustainable Investing: What Everyone Needs to Know	This academic work is an Oxford University Press published book (2022). It focuses on various issues involving investing in sustainable companies and funds.
	Valentina Bruno	Financial globalization	This work identifies macroprudential policies aimed at dampening the volatility of capital flows, reducing agents risk-taking, and elevating the socio-economic welfare both inside the US and in emerging economies. Focus is on the social good that today's economists and financial leaders must consider when crafting policy.

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	Paul Yoo	The existence and importance of non-pecuniary preferences in asset pricing, corporate finance, and policies	This research focuses on empirical documentation of investors' non-pecuniary preferences in integrating environmental, social, and governance (ESG) information and theoretical examinations of how the existence of such preferences affect and shape asset prices, financial decisions, investment vehicles, and policies.
	Ericka Simmons	Green Valuation	This research is about feasibility of micro apartments and conversion of low-occupancy offices to residential with a minimum affordable component.
Information Technology & Analytics			
	Jay Simon	Self-Sustaining Supply Chains	This stream of work models and analyzes supply in situations where one or more resources needed for logistics are not locally available and must be transported via the supply chain itself. Such situations includes humanitarian aid and disaster relief, remote oil and gas exploration, and expeditionary military operations. Cost and resource consumption behave very differently in these settings as compared to traditional supply chains.
	Gwanhoo Lee	Government use of AI for improving social welfare	This research investigates how governments may use AI/ML to identify people who are eligible for receiving social welfare benefits but not current recipients.
International Business			
	Jennifer Oetzel	Social Sustainability	This research focuses on business adaptation to climate change.
	David Bartlett	Electric Vehicles and Sustainability	This research is an examination of sustainable sourcing in the global EV value chain.

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	Fabian Koss	Sustainability Metrics	In this research, students selected an industry and provided an analysis of what the most important sustainability metrics are in that industry and why.
	Ayman Omar	A Behavioral Theory of Sustainable Supply Chain Management Decision Making in Non-exemplar Firms	This research examines challenges faced by supply chain managers to implement sustainability initiatives throughout their global operations.
Management			
	Garima Sharma	Employee-CSR tensions: Drivers of employee (dis) engagement with contested CSR initiatives	Involving more employees in CSR, as well as the magnitude of organizational change required to address pressing social issues, are likely to trigger employee-CSR (E-CSR) tensions, i.e., tensions between employees' personal preferences for organizational CSR initiatives and their perceptions of the actual organizational CSR initiatives. The research draws on the literature on individuals' responses to paradoxical tensions to unpack how and why employees who experience E-CSR tensions (dis)engage differently with CSR initiatives. The research develops a conceptual framework around the interplay of three drivers (type of tension, cognition, and organizational situatedness) to explain the employee response to E-CSR tensions in terms of different types of (dis)engagement with CSR initiatives.
	Anna Fung	Chief sustainability officers	This research focuses on antecedents and effects of having CSOs on firm strategy.
Marketing			
	Ronald Hill	Social Sustainability	This research focuses on how sustainability impacts diversity, equity, and inclusion.
Literature			
	Melissa Scholes Young	The Hive Flood	These academic works focus on climate fiction in the Midwest.

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Mathematics & Statistics			
	Alexandra Kapatou	Cost effective experiments	This research works on performing experiments with the least cost and expense on human effort and environmental destruction.
Philosophy & Religion			
	Joseph Harroff	Greening Philosophy and/of Religion	This research expands thinking of ways to make philosophy and/of religion more green in theory and practice.
Physics			
	Babak Salehi Kasmaei	lithium-ion batteries	This research works on estimating the useful lifetime of rechargeable batteries.
Politics, Governance & Economics			
	Alexandria Wilson-McDonald	Social equity and gender equality	This research focuses on the politics of gender in Central Eastern Europe. It examines the gendered elements of de-democratization and social movement activism in the region.
Public Administration			
	Sonja Walti	Preventing breakdowns in the adaptive governance of fire-retardant chemicals	This research examines the introduction and subsequent attempts at rolling back the ubiquitous use of fire retardant chemicals in everyday materials and furnishings. It does so with an eye toward their (adaptive) governance and our policies' ability to adapt and learn new ways of addressing the problem of flammability and fire hazards.
	Marquise McGraw	Equity Implications of Lead Service Line Location in NYC	This project examines lead service line locations in NYC and implications for policy.
	Daniel Fiorino	The Future of Environmental Protection	This project considered how to move the US toward a more equitable system of environmental protection in the future.
Sociology			

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	Chenyang Xiao	Public concern for the environment in China	This research uses survey data to monitor public support for environmentalism and environmental protection.
	Jerri Husch	Edible Campus; access to healthy food, land use	This research is an assessment of local land use and options for food security and community engagement.
School of Education			
	Hannah Jardine	Multiscale RECIPES for Sustainable Food Systems - Education Cluster	This research works to develop and research the impact of an undergraduate course about wasted food challenges and solutions.
Government			
	Barbara Soares Lima Dos Santos	Climate lobby	This research focuses on how the lobby of climate focused organizations lead to different policy outcomes.
Biology			
	Anny Cárdenas	Microbiome-mediated mechanisms that support adaptation to environmental change:	This lab investigates the microbiomes of aquatic hosts in the context of changing environmental conditions to identify microbial strategies that support host environmental adaptation.
Computer Science			
	Roberto Corizzo	Multi-aspect renewable energy forecasting	This research investigated the performance of predictive clustering trees with the new feature space, compared to the original feature space, in three renewable energy datasets.
Public Communication			
	Cathryn Borum	Comedy and the climate movement	This was work about how comedy can be used to connect people and get them to empathize with the climate movement.
Law			
	William Snape	International biodiversity litigation	This academic work is about the challenges of enforcement that strong conservation laws face.