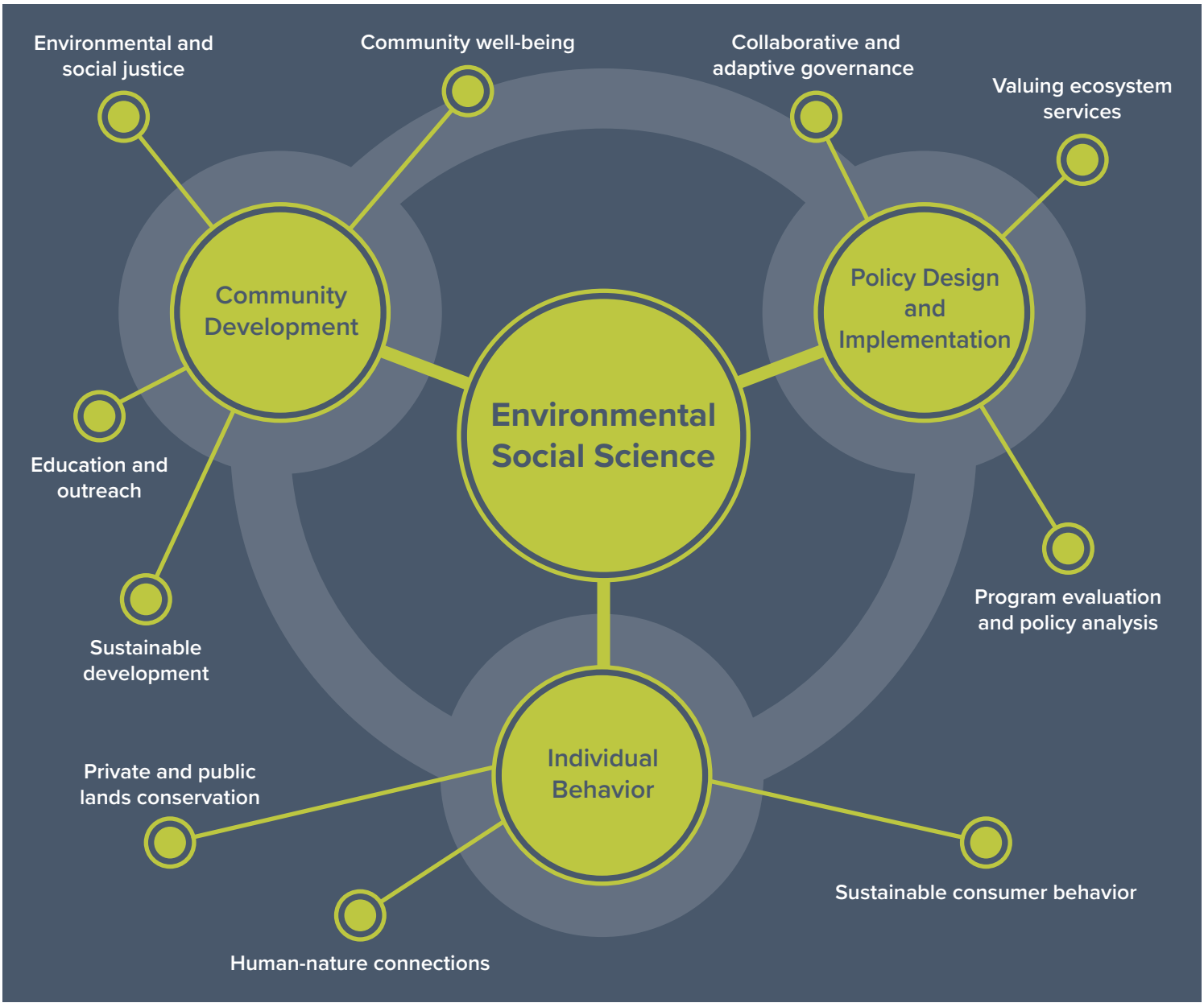
SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES

The Environmental and Social Sustainability Lab

ESS.OSU.EDU

The Environmental and Social Sustainability (ESS) lab is a community of scholars working to improve scientific understanding of sustainability in an interdisciplinary context. Our faculty, students, and research staff represent a range of social science perspectives, and are focused on managing and conserving our environment and natural resources. The lab facilitates cooperation between faculty, students, local government, and other stakeholders and provides resources to advance research and understanding of the societal drivers of environmental action.



THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

Mission/Vision

Our mission is to promote the ESS Lab as a place for innovative research in and application of environmental social science. We wish to complete this with the following goals:

1. Promote the development and dissemination of academic research in environmental social science
2. Initiate and develop research partnerships with The Ohio State University-internal and external collaborators
3. Mentor students and early career researchers in methods and theories in environmental social science
4. Communicate opportunities for research, training, and employment in environmental social science
5. Provide longitudinal data on student sustainability beliefs/behaviors for academic and administrative partners at the University

We foster attention to diversity and inclusion throughout all of our research themes, in ways that are context- and method-dependent.

Tools and Resources

34 computers each equipped with more than 10 software programs; such as, STATA, SPSS, and MAXQDA

Physical lab for in-person studies, including 2 interview rooms with AV recording and an undergraduate subject pool

Faculty, research staff, and students from a wide range of disciplines employing quantitative and qualitative social science methodologies

File processing and storage space and access to a mobile computing lab

Areas of Study

Individual Behavior

- **Sustainable consumer behavior:** Why do people act in pro-environmental ways (or not)? What are effective approaches for engaging people in pro-environmental behavior?
- **Private and public lands conservation:** What motivates long-term thinking and conservation among private (e.g., farmers) and public land managers (e.g., natural resource managers)? How do policies affect decision making and physical conditions on the landscape?
- **Human-nature connections:** What psycho-social factors shape human-wildlife interactions and influence wildlife conservation and management? How do people use outdoor spaces? How is human well-being affected by outdoor recreation?

Community Development

- **Community well-being:** What programs, policies, and societal conditions can enhance community well-being in socially just and environmentally responsible ways? What are the characteristics of local environments, communities, or lifestyles that enhance well-being and improve sustainability?
- **Environmental and social justice:** How do social processes create and sustain environmental inequities and how do these inequities affect the health and well-being of vulnerable or disadvantaged communities?
- **Sustainable development:** How do communities adapt to social and environmental change? What factors lead to positive social, economic, and environmental change for vulnerable communities? Do the answers depend on context (e.g., rural vs. urban, U.S. vs international location)?
- **Education and outreach:** What are effective ways of working with community partners? How are educational efforts for community audiences developed and evaluated?

Policy Design and Implementation

- **Collaborative and adaptive governance:** Under what conditions do groups of actors work together to solve environmental problem and how does such collective action emerge? How do stakeholders (government and non-governmental actors) engage in collaboration to solve environmental problems?
- **Valuing ecosystem services:** What is the economic value of ecosystem restoration? What are the economic impacts of shifts in resource management regimes?
- **Program evaluation and policy analysis:** Do programs achieve stated purposes upon implementation? What are the environmental impacts of policy?

Measuring Success

- **Funding and advancement of projects involving sustainability-related topics and behaviors**
  - In 2021, $53,655 in lab support was received from Lukuru Wildlife Research Foundation to contribute toward research on coyote management in Ohio.
  - ESS Lab was awarded a $26,690 grant in 2020 from OSU Energy Partners in support of the continuation of the Campus Sustainability Survey.
  - ESS lab's Sustainable Behavior (SuB) group was awarded $308,117 in 2019 to fund the Behavioral Energy Conservation (BEC) living lab.
  - ESS Lab served as a research lead for several studies within the Smart Columbus Assessment, a project through the city of Columbus which reviewed the impacts of the Smart Columbus program.

- **The promotion and continuation of partnerships with Ohio State-internal and external partners**
  - A sponsored-project partner manual has been created and is publicly available on the ESS website.
  - A campus-wide sustainability survey was constructed in partnership with The Sustainability Institute (SI), the ENGIE-Axium energy partnership, The Office of Student Life, Facilities, Operations, and Development (FOD), ESS researchers, and collaborating faculty.
  - An assessment (via the ESSREP below) of the structure and wording of Franklin Soil and Water Conservation District outreach surveys concerning water quality knowledge and behavior around central Ohio.
  - Final reporting on stakeholder perspectives on white-tailed deer management in Ohio for Ohio Division of Wildlife.

- **The ESS Lab contributes to the advancement of the Student Research Experience (ESSREP) Subject Pool, which provides an opportunity for School of Environment and Natural Resources (SENR) undergraduates to participate in research in exchange for class credit.**
  - Since 2018, ESSREP's large subject pool has greatly contributed to the studies of over 20 graduates, postdocs, and faculty.
  - The ESSREP has provided extra credit and research experience to over 1000 undergraduate students in SENR courses.

Faculty

Kerry Ard
Associate Professor; Environmental and Resource Sociology

My research explores how social processes create and sustain environmental inequalities and how these unequal exposures link to health disparities. My work covers the arc of environmental inequality from political causes to ultimate consequences of social disparities in health, with the goal of identifying the political leverage points that will address social inequalities.

Ramiro Berardo
Associate Professor; Environmental and Natural Resources Policy

I am a political scientist studying how policy actors learn to collaborate with each other when they face complex environmental problems in the U.S. and South America. I use varied methods and theoretical approaches to understand how policy stakeholders build collaboration ties over time, and obstacles that break down collaboration and spark conflict.

Jeremy Brooks
Associate Professor; Environmental Social Science

I am an interdisciplinary environmental social scientist who is interested in understanding how we might achieve a more sustainable world. I apply concepts and methods from evolutionary anthropology, institutional economics, psychology, sociology, and other disciplines to study biodiversity conservation, sustainable development, environmental behavior, and sustainable consumption at multiple scales of human organization.

Jeremy Bruskotter
Professor; Human Dimensions of Wildlife

I study how people make conservation-related judgments and decisions, and their intersection with conservation policy. As a member of the Terrestrial Wildlife Ecology Laboratory, my research is inter-disciplinary and often focused on wildlife conservation, however, the general aim is to assist societies in building policies and practices that promote biodiversity and sustainable lifestyles.

Alia Dietsch
Assistant Professor; Parks, Protected Areas, Natural Resources Management

I'm an environmental social scientist using social psychology to understand multilevel processes affecting conservation behavior. I investigate how the social fabric of everyday life shapes values, and how those values shape everyday life in conservation-relevant domains, including human-nature interactions, endangered species management, parks and protected area management, recreation and visitor manage-ment, and noncompliance.

Matthew Hamilton
Assistant Professor; Environmental and Natural Resources Policy

I am interested in how people and organizations work together to solve environmental problems, and specifically, how collaborative networks respond to environmental change. Recent work has examined how individuals and groups grapple with complexity in rapidly changing hazard-prone landscapes, and how social interaction shapes policy processes that address environmental risk.

Shoshanah Inwood
Associate Professor of Community; Food and Economic Development

As a rural sociologist, I focus on the social dimensions of sustainability in food and agriculture. I focus on health and well-being in the farm sector, social factors affecting farm growth, and community-based economic development through food and agriculture. I utilize a mixed methods approach integrating qualitative and quantitative data collection and analysis.

Douglas Jackson-Smith
Professor; Rural Sociology and Water Security

I am a sociologist exploring the structural and individual drivers and consequences of technological and structural change in agriculture. My research is collaborative and interdisciplinary, highlighting the human dimensions of complex environmental systems. I prioritize participatory models that integrate the voices of farmers, citizens, and stakeholders in the design and use of research.

Jeffrey Jacquet
Associate Professor; Rural and Natural Resource Sociology

I am a rural and natural resource sociologist with a focus on energy development, including social impacts from the development of renewables and fossil fuels other areas of focus include rural community development, social impact assessment, and the social-psychology of environmental change.

Kristi Lekies
Associate Professor

I am a transdisciplinary social scientist with a background in social work, rural sociology, and human development. I study individuals' experiences in natural settings and communities, with emphasis on children and youth. I also serve as evaluator on projects related to education and climate change.

Sayeed Mehmood
Associate Professor; Natural Resource Economics

I examine environmental and natural resource-related issues from an economic perspective. I apply economic theories to human behavior related to the natural environment, including valuation of ecosystem services, incorporation of non-timber forest products in forest management decisions, economic impacts of shifts in resource management regimes and products markets, and natural resource policy analysis.

Nicole Sintov

Assistant Professor; Behavior, Decision-Making, and Sustainability

I am an environmental psychologist advancing psychological theory while producing insights that can be applied to benefit the environment and human welfare. My work focuses on the role of individual-level behavior and decision-making in sustainable consumption with an emphasis on energy contexts (e.g., home energy use, energy efficient technology adoption and use).

Eric Toman

Professor

My research is focused on developing a better understanding of the social dimensions of coupled human and natural systems. Using theory and methods from sociology and social-psychology, I examine the factors that influence the adoption of behaviors that enable adaptation to changing environmental conditions.

Robyn Wilson

Professor; Risk Analysis and Decision Science

I focus on decision making under risk and uncertainty, primarily in the context of managed landscapes and climate adaptation (e.g., forests and wildfire, agricultural landscapes and water quality). Specifically, I study individual decision making, and then use that to develop outreach and decision support tools that assist individuals in making informed choices.