

Overview

The Center for the Environment leverages the breadth of Purdue's research and creative strengths from across the campus to address important and complex environmental challenges facing our local, state, national and global communities. Three interconnected aspects of today's environmental challenges define our focus areas: community health and well-being, environmental decision-making and behavior and ecosystem functioning. By emphasizing the deep connections between human society, our built environment and the ecosystems that support us, the Center seeks promising solutions to complex environmental challenges.

Signature Research Areas

Diverse disciplinary perspectives come together through our signature research areas. Teams develop research projects, organize events and promote outreach.

- ▶ **Biodiversity:** Researchers focus on topics from global to microscopic scopes of biodiversity using approaches including detailed population and sensing mapping, AI and machine learning.
- ▶ **Building Sustainable Communities:** Members bring with them expertise in areas such as cognitive and motivational biases, cooperation and norms, decision-making, deep uncertainty, equity and justice, moral theory, political ecology, resilience, sustainability science, and socio-ecological systems.
- ▶ **Chemical Exposures:** The team's expertise includes multiple chemical exposures, public health implications of these exposures, end-of-life and transport of chemical contaminants in the environment, and remediation technologies.
- ▶ **Water Challenges:** Areas of strength include agricultural water management, water treatment technologies, protecting water resources, the human dimensions of water, and solutions for under-served communities.

Research Clusters

Research Clusters are growing interdisciplinary research areas at Purdue that bring together several faculty members from different disciplines who, together, approach key environmental challenges in nascent areas for the Center. We currently have research clusters in **Circular Economies, Cyber-Animal Systems, and Environmental Sensing.**

Signature Research Projects

The Center supports signature research projects that bring together multiple faculty and typically have external funding support.

- ▶ **Arequipa Nexus Institute for Sustainable Food, Energy, Water and the Environment**
The Universidad Nacional de San Agustín (UNSA) in Arequipa, Peru and Purdue University have partnered to create a bold new research, education, and innovation institute to work together on key challenges to a sustainable future for the peoples of Arequipa. They have a vision to promote a research, education, and innovation ecosystem where transformative solutions are explored.
- ▶ **Center for Global Soundscapes**
With funding from the National Science Foundation, NOAA, and the National Park Service, the Center brings together ecologists, engineers, social scientists and educators who use sound to study ecosystem health. Researchers employ AI and big data tools to probe millions of sound recordings.

Contact

Timothy R. Filley, Director (filley@purdue.edu)
Lynne Dahmen, Managing Director (ldahmen@purdue.edu)
web: www.purdue.edu/dp/environment

