THE UNIVERSITY OF VERMONT

GUND INSTITUTE
FOR ENVIRONMENT

UVM Research Experts Available for Vermont Leaders

The Gund Institute for Environment at the University of Vermont is a resource for policymakers. The Gund Institute accelerates research on environmental challenges in Vermont and beyond, informs decision making, and builds partnerships with government, business, and NGOs.

The Gund Institute's mission is to mobilize scholars and leaders to solve critical environmental problems targeting four global research themes:

- Sustainable Food Systems
- Climate Solutions
- Health and Well-being
- Resilient Communities

Gund Institute experts can provide analysis and research evidence on key issues for Vermonters:

Agriculture and food systems	**Climate and energy**
Food security, plant and soil science, agroecology, crops and pests, pollination, forestry and forest ecology	*Climate impacts, adaptation and resilience, transition to renewables, solar, wind, biofuels, biomass, geothermal*
Conservation science	**Economics and business**
Wildlife and biodiversity, invasive species, ecosystem services	*Sustainable business, ecological economics, rural community development*
Environmental policy	**Health and the environment**
Policy analysis, program evaluation, natural resource management	*Air pollution, mental health benefits of nature, soil and water contamination*
Infrastructure and design	**Environment and society**
Environmental engineering, urban green infrastructure, stormwater, ecological design, ecological restoration	*Environmental justice, value of nature, anthropology, environmental refugees and migration*
Spatial analysis	**Water**
GIS, changes in land use / land cover, global change	*Hydrology, water quality, nutrient runoff, flood mitigation*

Examples of UVM Research and Resources

VERMONT CLIMATE ASSESSMENT – **Gillian Galford** and state climatologist **Lesley-Ann Dupigny-Giroux** are leading Vermont's largest study of climate change and its impacts to support evidence-based decision making by state policy leaders.

FOOD INSECURITY – Meredith Niles and colleagues have found record levels of food insecurity in Vermont and continue to track critical data about Vermonters experiencing food insecurity and using food assistance programs.

SUSTAINABLE BUSINESS – Jane Kolodinksy, **Chris Koliba**, **Eric Roy** and others explore how to grow industries – from technologies that mitigate phosphorus runoff to sustainable hemp – in Vermont and beyond. Gund experts are exploring options for diversifying rural agricultural economies, including issues related to farming, processing, distribution, and market development.

PAYMENT FOR ECOSYSTEM SERVICES – Research by **Taylor Ricketts**, **Alissa White**, and others informs the design of state programs that pay farmers to build soil health, enhance crop resilience, capture carbon, and reduce agricultural runoff.

FLOOD RESILIENCE – Beverley Wemple and interdisciplinary researchers measure how landscapes can protect Vermont communities from increased flood risk. This work informs flood mitigation efforts and frames ongoing policy discussions about the benefits that natural ecosystems provide to people.

CLEAN WATER AND RESILIENCE IN LAKE CHAMPLAIN – Numerous Gund Fellows conduct policy-relevant research through the Vermont EPSCoR program, building the state's capacity for scientific research and training a diverse science workforce. **Jon Erickson** and **Brian Voigt** completed an EPA-funded study of the economic value of Lake Champlain through jobs, home values, recreation, and tourism.

POLLINATION – **Samantha Algers**, **Taylor Ricketts**, and others are experts in how bees pollinate fruit and vegetable crops. Their research involves outreach to farmers and has informed policies and management practices that support pollinator health, such as a Vermont law regulating the use of neonicotinoid pesticides.

LINKS BETWEEN HUMAN HEALTH AND ENVIRONMENT – A new Gund partnership with UVM's Larner College of Medicine funds collaborative research on health and environment for rural communities. **Christine Vatovec** has conducted a statewide survey on pharmaceutical use in Vermont and monitors wastewater for medications and COVID-19. **Donna Rizzo** uses computational tools to understand the spread of groundwater contaminants and disease risks.

THE UVM OFFICE OF ENGAGEMENT – The UVM Office of Engagement serves as a 'front door' for accessing resources and expertise at the university. **Chris Koliba** leads the Office of Engagement, including efforts related to Vermont's economic resilience, workforce development, and policy guidance.

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