The Role of Citizen Science in Natural Resource Management and Policy Decisions

Abstract: For centuries, the public has engaged in scientific research, building our understanding of the natural world, and expanding the geographic area over which data are collected. In recent years, the field of citizen science has formalized and grown exponentially. The United States has been a leader in volunteer water monitoring, with about 1700 programs engaging hundreds of thousands of volunteers to assess water resources in streams, lakes, beaches, wetlands and groundwater each year. Understanding the drivers of such programs, volunteer motivations, and outcomes of these efforts for the participants, their communities, and the environment can help other programs to develop more efficiently and effectively. Such knowledge benefits newly forming programs, sponsoring agencies and organizations, and the participants themselves. This presentation will share results of research that addressed such questions, including revealing seven traits of volunteer water monitoring programs that relate to their reported impacts on natural resource management or policy decisions.

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Kristine Stepenuck is currently Extension Leader for Lake Champlain Sea Grant Program and Extension Assistant Professor of Watershed Science, Policy, and Education in the Rubenstein School of Environment and Natural Resources at the University of Vermont. Her research focuses on improving understanding of outcomes of citizen science efforts, and engaging citizen scientists in evaluating water resources to identify and address local issues. She also engages in community-based social marketing research and outreach, which involves assessing motivations and barriers of specific audiences as related to adopting best environmental practices that influence water quality. Kris also supports a national network of volunteer water monitoring programs by maintaining a collection of web-based learning modules, a jobs board, listserv, and events calendar at: www.volunteermonitoring.org. She recently concluded a multi-year term on the board of directors of the Citizen Science Association, serving most recently as chair. She currently serves on the National Water Quality Monitoring Council Volunteer Monitoring Working Group. In addition, she serves as the US Public Advisory Group co-chair on the International Join Commission’s Lake Champlain-Richelieu River Flood Study.