

MOVING FROM DATA TO INDICATORS: LINKING WATER WITH SOCIETAL DECISIONS

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Biographical Sketch of Author

Elisabeth Graffy is an Economist with the Center for Science Policy in the USGS National Mapping Division. Previously, she served as national Policy Advisor for the National Water-Quality Assessment Program in the Water Resources Division and Environmental Policy Analyst for the U.S. Congress Office of Technology Assessment. The author's work bridges between the policy and science arenas, and includes enhancing the provision of USGS science to decision-makers as well as a research agenda on agricultural and environmental policy trends and innovations.

Abstract

As environmental science seeks ways to connect more effectively with societal needs and public decision-making, an important linkage relates to decision-making by policymakers and by the public at large. Making scientific information about water available, accessible, and useful for decision-making by policymakers and everyday citizens requires more than distributing water data more effectively. It requires that scientific insights be translated into indicators, narratives, visual or metaphorical forms that resonate with the existing knowledge bases of those who might use the information. The experience of the USGS National Water-Quality Assessment Program in working toward the development of such indicators provides an example of how such translation can be approached and with what results. This case indicates that grappling with the challenge of framing information about water quality into such terms can be good for science as well as for decision-makers because it forces disparate bits of information to be synthesized and evaluated in terms of "what they mean." This case also sheds some light on contemporary issues related to the framing or structuring of water policy issues, and how and why the framing results -- as well as the constraints, opportunities and accountability -- are different for science agencies as compared to regulatory or other entities.