



Contents lists available at ScienceDirect

Journal of Great Lakes Research

journal homepage: www.elsevier.com/locate/jglr

Building bridges in the Great Lakes: How objects and organization facilitate collaboration across boundaries



K.C. Williams*

Department of Geography, University of Wisconsin-Milwaukee, Milwaukee, WI 53201, USA

ARTICLE INFO

Article history:

Received 1 February 2014

Accepted 16 September 2014

Available online 14 November 2014

Communicated by Katherine Bunting-Howarth

Index words:

Boundary objects
Cultural ecosystem services
Participatory approaches
Qualitative analysis
Scenario analysis
Science–policy interfaces

ABSTRACT

The Great Lakes region has a history of innovative approaches to natural resource management. The Great Lakes Futures Project (GLFP), a scenario analysis process, built upon this history of participatory approaches to environmental governance. The GLFP connected diverse communities of participants, including natural scientists, social scientists, graduate students, and practitioners in an iterative process conducted over one and one-half years. The ongoing process resulted in the development of a collective understanding of current policy, possible ecosystem outcomes, as well as the identification of shared principles and policy recommendations. The purpose of this article is to investigate how the GLFP created the conditions for a bi-national community of scholars and practitioners to participate in a collaborative manner, overcoming disciplinary barriers in order to function as members of a team organized around an object that was important to all of the participants, the Great Lakes. The article presents a discussion of collaboration between disciplines and possible ways of overcoming the barriers. Data were collected through participant observation, where the author participated on a graduate student scenario-writing team. Observation was supplemented with semi-structured interviews and document analysis. The article contributes to a new understanding of how scenario analysis provides a forum for collaboration and how the use of objects can facilitate communication across disciplinary boundaries.

© 2014 International Association for Great Lakes Research. Published by Elsevier B.V. All rights reserved.

Introduction

The Great Lakes region has been called a laboratory for innovative and participatory approaches to natural resource management (Botts and Muldoon, 2005; Grover and Krantzberg, 2012). For example, Canada and the US agreed to implement an “ecosystem” approach in the Great Lakes Water Quality Agreement (GLWQA) (Christie, 1994; International Joint Commission (IJC), 1987). Ecosystem approaches are those that “integrate scientific knowledge of ecological relationships within a complex sociopolitical and values framework toward the general goal of protecting native ecosystem integrity over the long-term” (Grumbine, 1994). In other words, ecosystem approaches are meant to integrate the biophysical and human dimensions of natural resource management (Grover and Krantzberg, 2012).

Mandates to implement an ecosystem approach and consult with the public were considered innovations of the GLWQA (Muldoon, 2012). The innovations resulted from pressure by citizens and activists to be included. Historical accounts of the evolution of the GLWQA described the creation of a binational “Great Lakes Community” of advocates, including scientists, environmental organizations, agency staff, and journalists (Botts and Muldoon, 2005). Consequently,

nongovernmental organizations and local governments, who may have been left out of the process in the past, became active participants in environmental management (Crane, 2012). Many of the nongovernmental and intergovernmental organizations that were born in the wake of the GLWQA still exist today, continuing to organize communities and citizens around the Great Lakes region issues (Botts and Muldoon, 2005; Crane, 2012).

The International Joint Commission directives to implement an ecosystem approach and consult with the public did not come with instructions, resulting in a wide range of activities (Beierle and Konisky, 2001; Hartig and Law, 1994; International Joint Commission, 1987). Lack of guidelines for implementation of ecosystem approaches or public involvement in the GLWQA has made the Great Lakes region a laboratory for understanding participatory processes in natural resource management. While participatory approaches to resource management can be viewed as a way to improve outcomes by increasing support and legitimacy, it would be unwise to underestimate the complexity of implementing such approaches. MacKenzie (1996) argued that “an ecosystem approach calls for the functional rearrangement of the organizations and interests as equal members of a team”. In practice, creating a team means trying to identify and navigate the logistical and institutional barriers of integrated resource management. In order to be successful, natural resource managers who wish to implement integrated approaches need to recognize and manage

* PO Box 413, Bolton Hall Room 410, Milwaukee, WI 53201, USA. Tel.: +1 414 303 3078.
E-mail address: kcw2@uwm.edu.

competing interests between agencies and interest groups, try to maintain effective and open communication channels, and identify common goals and objectives (Christie, 1994; Giebels et al., 2013; MacKenzie, 1996; Slocombe, 1993).

Despite the evolving binational agreements, innovations, and policies focused on maintaining the socio-ecological integrity of the Great Lakes region, advocates and experts are concerned that ecosystem conditions are not improving (Bails et al., 2005; Grover and Krantzberg, 2012). Unfortunately, the perception of researchers and advocates is that human land and resource uses, like expanding urbanization and continued deforestation, are causing ongoing environmental degradation, and those uses cannot be adequately addressed by scientific and regulatory agencies (Francis and Regier, 1995). The question becomes: if existing innovative policies and institutions have failed to safeguard the health of the Great Lakes region, what more can be done?

Prompted by the challenges facing water stewardship, the Transborder Research University Network (TRUN), a collaborative network of Canadian and US research institutions, initiated a project on transboundary water governance. The project was the Great Lakes Futures Project (GLFP), which employed scenario analysis in order to identify deficiencies in current environmental (and other) policies in order to make useful recommendations for policymakers based on scientific research (Alcamo et al., 2003). Scenario analysis, as employed by GLFP, is an analytic tool used to envision alternate futures in order to understand the potential impacts of the current policies on the ecosystem services of a geographically defined area through a series of stories (Laurent et al., 2015a,b).

The stories generated through the GLFP enabled participants to develop a shared understanding of how current policies, environmental change, and society could interact in surprising ways to result in four diverging visions of the region 50 years in the future. A diverse array of stakeholders, including natural and social science scholars, graduate students, and practitioners participated in an iterative process conducted over a period of one and one-half years. The outcomes of the process were both the creation of four different future-histories that explained what the Great Lakes region might look like if the environment and society changed, as well as policy recommendations based on the vulnerabilities exposed in the stories.

The purpose of this paper is to investigate how the GLFP created the conditions for members of diverse disciplinary communities to collectively map out policies and priorities that would lead the region to a sustainable future, overcoming disciplinary barriers in order to function as members of a team. This paper tries to identify what we can learn from scenario analysis about participatory processes in environmental management, as well as how objects can play an important role in the process.

Bringing the natural and social together in natural resource management

In spite of best intentions, different methodologies, values, and languages in the natural and social sciences pose significant barriers, resulting in a number of challenges for understanding the biophysical and human dimensions of environmental management (Lélé and Norgaard, 2005; Robinson et al., 2012). For example, some scholars like Christie (1994) argued that an incomplete understanding of ecosystem dynamics is a barrier to the implementation of integrated resource management, while other scholars demonstrated that integrating the social dimensions into ecological models that inform management decisions was the barrier (Endter-Wada and Blahna, 2011; Redman, 1999; Redman et al., 2004). One challenge is that natural scientists start the conversation with the “resource,” while policy makers and social scientists start with the “social consequences” of a policy (Krantzberg, 2004; McLaughlin and Krantzberg, 2006). Another challenge is that some natural scientists conceptualize the place of humans in the ecosystem differently from social scientists. For example, natural scientists may view human activity as a disturbance to an

ecosystem, while social scientists might describe the historical, economic, or political context of the activities that cause the “disturbance” (Campbell, 2005; Endter-Wada et al., 1998; Robinson et al., 2012). Different starting points and different views of human activity can lead to frustrations between collaborators and with the process, as well as make it difficult to create realistic goals or expectations (Giebels et al., 2013; Slocombe, 1993).

Natural and social science scholars have started to identify ways to overcome the obstacles to collaboration in environmental research and management. Robinson et al. (2012) conducted a survey of research managers of National Estuarine Research Reserves to identify barriers to bringing social sciences into natural resource management in reserve projects, as well as recommend strategies to better consider human dimensions. The authors suggested practical steps to introduce social sciences into reserve work, including actively emphasizing what social sciences can add to natural resource management, making funding available, providing access to social science expertise, and completing demonstration projects.

Similarly, lessons can be learned from research in urban ecology and cultural ecosystem services. For example, McIntyre et al. (2000) described the differences between how natural scientists consider urbanization. Natural scientists may consider the general presence of buildings or houses on landscape as an urban environment, whereas social scientists and planners define urbanization through series of metrics that provide a richer explanation for how urbanization may be interacting with ecosystems. In other words, natural and social scientists documented similar phenomena, but the social scientists contributed significantly more detail on human dimensions of urbanization. Social scientists and planners can enrich environmental management through contributions to the societal value of the environment. In another example, the Millennium Ecosystem Assessment defines cultural ecosystem services as the nonmaterial benefits that people get from ecosystems, including “cultural diversity, spiritual and religious values, knowledge systems, educational values, inspiration, esthetic values, social relations, sense of place, cultural heritage values, recreation and ecotourism” (Daniel et al., 2012). Researchers have explained that cultural ecosystem services have been overlooked because of the challenge in quantifying them (Bostrom, 2012), but the lessons of urban ecosystem scientists would suggest that inviting the scholars who study cultural values or place attachment could result in fruitful collaborations.

The researchers and participants, as well as the process, also shape how the natural and social come together in environmental research. The invitation of key types of participants on interdisciplinary teams, like graduate students and postdoctoral scholars, play a role in working across disciplines. Studies of interdisciplinary research concluded junior scholars may be less bound by disciplinary outlooks, more creative, and more open to taking risks (Lemos and Morehouse, 2005; Morse et al., 2007). Further, studies of interdisciplinary research have suggested that collaboration should be based on open and ongoing communication from the project's beginning (Campbell, 2005; Donaldson et al., 2010; Podestá et al., 2013; Strang, 2009). The next section looks more deeply into the question of participation, as well as some of the methods, strategies and objects that facilitate how natural and social science scholars, as well as practitioners, learn from each other.

The role of participation and objects in crossing boundaries

Participation in governance of environmental resources is considered important in order to solicit input, or at least prevent opposition to decisions (Cohen, 2012; MacKenzie, 1996). Legitimacy and accountability are themes common in the literature. For example, the provisions of the GLWQA led the International Joint Commission to be more responsive to the public, which in turn, has led to greater accountability for the Canadian and US governments (Linton and Hall, 2012). Beierle and Konisky (2001) concluded that in the Great Lakes region,

Download English Version:

<https://daneshyari.com/en/article/4398325>

Download Persian Version:

<https://daneshyari.com/article/4398325>

[Daneshyari.com](https://daneshyari.com)