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**INSTITUTIONAL ANALYSIS FOR ENVIRONMENTAL DECISION-
MAKING: A SYMPOSIUM**

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SYMPOSIUM INTRODUCTION

Berton Lee Lamb*

BACKGROUND

Institutional analysis is "the process of analyzing the design and performance of an institutional arrangement" (Imperial, 1999, p. 449). An institutional arrangement is the collection of laws, regulations, policies, and organizations that pertain to a particular policy question. Institutional analysis is unique because it proposes an "explanatory theory" to predict behavior (Ostrom, 1986). As applied to environmental policy, environmental conflict resolution, and environmental management, institutional analysis has emerged as a field that holds great promise but remains underdeveloped. As a contribution to theory, institutional analysis could provide a means to better understand how policy is implemented. As a contribution to the practice of Public Administration, institutional analysis could provide managers with a clearer picture of the context in which they must operate. Ingram and her colleagues (Ingram, Mann, Weatherford & Cortner, 1984) and Ostrom (1986) proposed guidelines for improving institutional analysis.

Imperial (1999) and others have argued that the shift toward ecosystem management has led to more comprehensive management processes and increased public involvement. Achieving the hoped-for results of ecosystem management—including the better use of science in decision-making—requires explicit attention to "institutional design and performance" (Imperial, 1999, p. 449). The main concern is how organizations interact. Lamb (1980) and Ostrom

* Berton Lee Lamb, Ph.D., is Chief of the Policy Analysis and Science Assistance Branch of the Fort Collins Science Center in the U.S. Geological Survey. His research interests are in environmental policy, decision-making, and conflict resolution.

(1986) argued that in many fields of policy, organizations consistently play roles as actors in "action arenas." Consequently, the focus of institutional analysis should be on variables such as participants, positions, outcomes, action-outcome linkages, control exercised by the participants, and (perceived) costs and benefits to the actors (after Ostrom [1986]). Ingram et al. (1984) identified 4 tasks of institutional analysis: identifying actors and their stakes, identifying resources actors can use to advance their interests, identifying the orientations of different decision arenas (i.e., how different arenas may be predisposed toward outcomes), and analysis of the means to overcome institutional impediments.

APPROACHES TO INSTITUTIONAL ANALYSIS

There are several promising approaches to institutional analysis. Among those are: the institutional analysis and development framework (IAD) as described by Crawford and Ostrom (1995) and modified by others, such as Koontz (Koontz, 1997; 2006), the Legal-Institutional Analysis Model (LIAM) as described by Lamb, Lamb, Taylor, Burkardt and Ponds (1998); Wilds (1990), Caughlan (2002), and Burkardt and Ponds (2006); the Advocacy Coalition Framework (ACF) as described by Sabatier and Jenkins-Smith (Sabatier & Jenkins-Smith, 1993; 1999); and the policy design framework designed by Schneider and Ingram (1997).

SYMPOSIUM

The focus of this symposium is on environmental decision-making. Authors in this symposium explore the tools of institutional analysis by describing models, evaluating procedures, testing hypotheses, and reporting on practical applications.

In the first article, Kusel, Cortner, and Lavigne examine how institutional analysis complemented 31 community case studies included in the evaluation of the Northwest Economic Adjustment Initiative. They use the policy design framework (Schneider & Ingram 1997) as a tool for describing and assessing the institutional design of the initiative, and the lessons learned from the integrated findings of the institutional analysis and community case studies.

In their article, Kauneckis and Imperial report on the emergence of collaborative watershed management in Lake Tahoe by focusing

on the changes in institutions that managed coordination and conflict. They followed the work of Ostrom and others (Crawford & Ostrom, 1995; Kiser & Ostrom, 1982; Ostrom, Walker & Gardner, 1994) to develop the concept of a complex environmental commons to differentiate the situation of Lake Tahoe from simpler common pool resource dilemmas.

Collaborative watershed management is also the subject of the article by Ryan and Bidwell. They look at Washington and Oregon cases to better understand how the structure of these partnerships, particularly the policies that foster their development, may contribute to achieving either procedural or substantive policy goals. Despite differences in design and intent, both States face similar institutional challenges including obtaining adequate participation, developing and sustaining organizational capacity, and implementing plans.

Stakeholder analysis is the subject of the article by Koontz and Hoag. They use the LIAM (Lamb, et al., 1998; Wilds, 1990) to explain how underlying institutional factors give certain stakeholders a greater level of influence over the policy outcome. They extend the use of the LIAM by integrating concepts from decision analysis and public choice economics into a single, comprehensive approach called Disparate Stakeholder Management.

By reviewing two Mexican case studies (Lerma River-Lake Chapala and Paso del Norte), Lybecker illuminates the assumptions underlying the LIAM. Because it was designed for use with natural resource issues in the United States, it is interesting to see results of the LIAM from cases outside of that country. Although the LIAM provided helpful institutional analyses, she is able to point out the limitations that should be addressed for international applications.

Writing about the interface of agricultural and environmental policy in Finland, Kröger uses institutional analysis to describe and interpret policy changes in these domains since Finland entered the European Union. She examines the significance of these changes for policy development and discusses how learning can be seen as a key for successful policy process.

In the article by Day, the author gives an overview of Q Methodology, a form of factor analysis intended to differentiate individual respondents based upon their subjective understandings of the situation under question. He suggests how it might be applied in

an institutional analysis setting by focusing on several institutional analysis and policy studies frameworks, especially rational choice models.

Taken together, these articles provide examples of the range and depth of scholarship in the field of institutional analysis for environmental decision-making. Perhaps the major contribution of the symposium is in the field of decision-making. The articles illustrate how institutional analysis may help promote understanding and collaboration.

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