

**Oran R. Young, Leslie A. King, and Heike Schroeder,
Eds., *Institutions and Environmental Change: Principal
Findings, Applications, and Research Frontiers***

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Institutions and Environmental Change edited by Young, King, and Schroeder report on the findings from a decade-long research project on the Institutional Dimensions of Global Environmental Change (IDGEC). This volume chronicling the intellectual efforts and contributions of researchers affiliated with the project seeks to answer three main queries: (1) How has the study of institutional dimensions of environmental change developed since the project's inception? (2) Do institutions matter when addressing environmental issues? and (3) What lessons can be derived from the achievements of IDGEC, and how can policy makers utilize the knowledge gained to better understand the role of institutions in alleviating environmental problems? Although not all of these questions are addressed with equal rigor in the book, the collection of chapters ultimately unite to provide the reader with both a sense of the magnitude of IDGEC's contribution to the study of institutions and a set of new analytical tools which may be employed by social scientists and policy makers alike to generate a greater understanding of the impact of institutions in the realm of environmental change. Despite the authors' lack of uniform attention paid to the book's central queries the resulting work of long-term international scholarship constitutes a whole that is greater than the sum of its parts.

A major strength of the compilation work resides in its organization. The book is elegantly divided into two sections reflecting the essence of IDGEC's Science Plan: (1) research foci, which focuses on issues of causality, performance, and design factors relevant to institutions, and (2) analytic themes, namely institutional fit, interplay, and scale. Research foci refer mainly to the evaluation of the effects of institutions and institutional architecture, whereas analytic themes offer suggestions as to how institutions may be more aptly suited to engage problems that occur at the nexus between the biophysical and socio-ecological systems, innovative ways of analyzing institutions based on their interactions with one another, and locating the appropriate level at which an institution would work best to address an environmental challenge. More concisely, the first half of the book deals with epistemological issues pertaining to the study of institutions and the second portion of the book explores burgeoning areas of research on institutions. Aided by its logically

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grouped and easily navigable sections, the book makes a compelling case for its relevance among significant works in the study of institutions and environmental policy.

The chapters on research foci entail a discussion of largely methodological issues inherent in the study of institutions. While Underdal adequately but unremarkably maps out the positive developments and remaining difficulties in assessing the causal significance of institutions, this half of the book earns high praise for Mitchell's chapter on evaluating institutional performance and Young's chapter on institutional diagnostics. Mitchell takes on the daunting task of explaining how to appropriately evaluate the success or failure of institutions. Using concepts from logic (i.e., counterfactual reference points), normative standards such as goal attainment, problem solving, collective optima, and performance-based scoring, Mitchell articulates a range of possible measuring sticks which may be useful when evaluating institutions. He also describes a variety of additional approaches instrumental in evaluating institutions that serve to highlight the important methodological advances achieved by IDGEC. Some of the more innovative ones include "leading indicators," public commitments, and the creation or strengthening of environmental norms as well as economic performance dimensions ranging from cost-effectiveness to economic equity. Mitchell concludes by looking anxiously to the future and suggesting that researchers should strive to develop new institutional metrics that incorporate multiple performance indicators. Young's chapter on institutional diagnostics is arguably the single most significant contribution of the volume to both institutional research and policy making. Through his explication of the diagnostic technique of institutional design, Young proposes a fairly simple yet comprehensive system of inquiry for assessing the areas of critical need central to constructing effective institutions, memorably dubbed the "Four Ps": Problems, Politics, Players, and Practices. Young concludes his chapter modestly, carefully paying tribute to variables exogenous to the institutions he wishes to better through the diagnostic method that can affect the behavior of socio-ecological systems. Still, Young remains hopeful that diagnostics can be utilized by policy makers in order to tackle problems in the environmental arena that are likely to persist well into the foreseeable future.

Of the chapters on analytic themes (i.e., fit, interplay, and scale) examined in the second half of the book, Gehring and Oberthür's chapter on interplay is certain to generate substantial subsequent scholarship and overshadow the sections on fit (Galaz et al.) and scale (Gupta) that are meaningful in their own right. Regarding institutional fit, Galaz et al. raise important epistemological and implicitly ontological questions about how institutions can facilitate governance of complex socio-ecological systems. The main thrust of their analysis centers on how and why institutional misfits occur and what lessons can be extrapolated from their failure to comport with the interconnectedness of social and ecological systems. Gehring and Oberthür take on the promising but underdeveloped study of institutional interplay. The authors of this chapter argue quite convincingly for the advancement of research on the topic of institutional interaction, an area of analysis rife with possibilities for empirical study given the proliferation of institutions and their overlapping substantive emphases. Although Gehring and Oberthür offer only a rudimentary research design proposal for approaching the issue of institutional interplay, the questions they raise and their enumeration of various policy implications will no doubt be integral in pushing forward the institutional research agenda. Finally, Gupta informs the reader about intellectual developments in the emerging area of the role that scale and scaling play in environmental governance. Relevant and useful in the study of institutions and environmental policy to be sure, Gupta's work and the notion of scale in general could almost be subsumed within the chapter on fit. However, Gupta adds to the volume an

interesting, if not necessary, discussion of how “actors and networks frame environmental problems in terms of scale” (230). By combining considerations such as “scalar shopping” with the more interpretivist element of framing, Gupta facilitates an interest in institutional analysis that will resonate profoundly with qualitative researchers.

Despite the landmark achievements of the IDGEC researchers accounted for in this volume, one major critique is that upon completing the book, the reader is likely to be left with a feeling that the project did not deliver on its lofty expectations in terms of providing an array of sophisticated methodological tools capable of analyzing and devising institutions applied to an environmental context. At times throughout the book passing mention is made of yet undeveloped methodological innovations that effectively tease anticipation from the reader which later remains unfulfilled: “What is needed is a dynamic model of a causal complex in which feedback loops and interaction effects are likely to be important elements” (62). Therefore, it is not so much that the book itself falls short so much as IDGEC only takes the researcher or policy maker to the precipice of promise for institutional analysis on environmental governance without providing the methodological instruments one would need to rigorously analyze the dynamic and intellectually alluring institutional landscape. The fourth section of the book seeks to buttress the reader’s fall from the heights of unmet expectations by clarifying the policy implications and future research directions offered by the authors. Ironically, this portion of the book serves to highlight that which has already been described eloquently throughout the work. In this sense, the final two chapters crystallize the main lessons to be drawn from this extensive research project while not adding any revelations that could not have been inferred from the previous sections.

Shortcomings aside, *Institutions and Environmental Change* showcases the culmination of 10 years of work on the study of institutions that details the significant achievements of IDGEC researchers in the analysis and conceptualization of institutions in the domain of environmental change. Timely and at times groundbreaking, this book will inspire a litany of work on environmental institutions and empirical research evaluating the effectiveness of institutions overall. It may be stated without reservation that the chapters constituting this volume of scholarly work offer essential reading for students of institutions, environmental policy, governance, and public policy alike.

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