

INTRODUCTION TO THE SPECIAL ISSUE ON INSTITUTIONS AND ECOSYSTEMS

Historical institutional analysis of social-ecological systems

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1. Introduction

Institutions, the rules that govern interactions between people, evolve over time. This special issue presents a number of detailed case studies of human–environment interactions during a significant historical period. With social-ecological systems we mean a set of people, their natural and human-made resources, and the relationships among them (Anderies *et al.*, 2004, Janssen *et al.*, 2005).

Institutions change because of various reasons, but the focus in this special issue, is institutional response in relation to environmental resources. The articles in this special issue show that institutions can change as a response to changes in resource availability, or motivations for efficiency improvements. The five articles originate from a special session organized in June 2004 on historical institutional analysis of social-ecological systems at the ‘Workshop on the Workshop 3’ conference held at Indiana University. All contributions used the framework proposed by Anderies *et al.* (2004) as a source of inspiration to describe and analyze long-term case studies of social-ecological systems. In this short introduction, I first discuss the concepts behind the articles followed by a brief introduction of each.

We are especially interested in the robustness and resilience of social-ecological systems. The robustness concept we use originates in engineering and is loosely defined as the maintenance of system performance either when subjected to external, unpredictable perturbations, or when there is uncertainty about the values of internal design parameters (Carlson and Doyle, 2002). Resilience, a similar concept to robustness that has been developed in ecology (Holling, 1973)

