

## Part III

# Institutions and Political Ecology Approaches

Part III brings together five cases discussing the evolution of institutional arrangements affecting natural resource management and urbanization in different parts of the Americas. They discuss trajectories of change in the context of interactions between local social-historical conditions, national policies, development projects, infrastructure change, and economic pressures and opportunities experienced by different social groups, from farmers and fishery communities to peri-urban and urban residents. They illustrate the sophistication of institutional approaches in incorporating multiple methodologies and research tools, including longitudinal and cross-sectional assessments, experimental economics, remote sensing and GIS, surveys, and institutional analysis frameworks (e.g., the Institutional Analysis and Development framework or IAD).

In Chap. 9, Castro analyzes the political and institutional history leading to recent and ongoing implementation of agro-extractive settlement projects (PAEs) in the lower Amazon floodplain. PAEs represent, in principle, a form of legal recognition of local resource management systems in the floodplain. This study analyzes the implementation process by focusing on the roles of four main stakeholders involved in 15 projects: federal agencies, NGOs, regional fisheries unions, and local residents. Castro sets this analysis by providing an overview of different lines of research on common-pool resource (CPR) management. He brings a unique perspective that benefits from long-term, longitudinal, and historical research dating back to the initial stages of comanagement systems in the floodplain. He analyzes how policies aiming at including local communities indirectly exclude other user groups, spurring tensions previously incipient in the area. He calls attention to the way conflicts develop as related to temporal and spatial dynamics of the resource system, i.e., marked by uncertainties regarding seasonal variations, land-water boundaries, and physical stability of the settlement and the opportunities and limitations created by cooperation among stakeholders to the performance of the comanagement systems in the region.

In Chap. 10, Lopez brings an experimental economics perspective to examine the role of incentives and sanctions on rural populations' behavior toward natural resources in Colombia. Her experiments on public goods and CPRs reveal the

limitations and pitfalls of top-down sanctions on the management of natural resources. In particular, Lopez calls attention to the limits and potentially counter-productive results of monetary penalties on small-scale farmers' land-use decisions.

In Chap. 11, Fudemma takes a comparative perspective to examine small-scale farmers living within and around national forests in Brazil. She analyzes conflicts faced by the farmers to meet their economic goals and expectations to conserve forest resources. She also benefits from longitudinal research examining institutional and land-use change at household and community levels in the lower Amazon. The two distinct Brazilian regional realities, i.e., national forests in the states of São Paulo and Pará, offer the opportunity to contrast trajectories of agriculture and cattle raising, forest management and non-timber forest products, rural tourism, and the differential ways small-scale farmers search for alternative solutions to improve their livelihoods.

Another excellent example of the value of longitudinal research, in Tucker's Chap. 12, provides a careful review of phases of institutional evolution in rural Honduras and its implications for local well-being and forest environment. Tucker examines the evolution of local resource management institutions amid changes prompted by market expansion, infrastructure, and local social and cultural changes. The chapter offers richly detailed analysis of local changes. Longitudinal and systematic ethnographic and institutional analysis approaches are integrated to remote sensing analysis and socioeconomic indicators to examine the (mixed) outcomes of economic and institutional changes to the local population. In general, as in other cases discussed in the book, Tucker shows how local efforts to improve economic conditions and to develop institutions for forest management are hampered by lack of access to basic services, such as health and education.

Closing Part III, in Chap. 13, York and Munroe examine the process of urbanization and exurbanization in the United States, in particular the role of federal, state, and local land-use policies. The chapter considers the expansion of urban areas into agricultural and forest lands and discusses the implications of fragmenting urban and rural spaces to rural communities. Contextualized within a broader literature review and empirical research, it integrates policy analysis within a spatial framework to examine urban settlement cases in the states of Ohio, Indiana, and Arizona. It considers zoning, development impact fees, and public land designations. It calls particular attention to the impact of these policies on local land markets and, in turn, their role on the rate and intensity of expansion of urban settlements. York and Munroe highlight the differential role of federal and state institutions on urban land use in the American West and the importance of local zoning in the Midwest.