CAMBRIDGE Studies in Landscape Ecology

Integrating Landscape Ecology into Natural Resource Management

Rapidly increasing global population has dramatically increased the demands for natural resources and has caused significant changes in quantity and quality of natural resources. To achieve sustainable resource management, it is essential to obtain insightful guidance from emerging disciplines such as landscape ecology. This text addresses the links between landscape ecology and natural resource management. These links are discussed in the context of various landscape types, a diverse set of resources, and a wide range of management issues. A large number of landscape ecology concepts, principles, and methods are introduced. Critical reviews of past management practices and a large number of case studies are presented. This text provides many guidelines for managing natural resources from a landscape perspective and offers useful suggestions for landscape ecologists to carry out research relevant to natural resource management. In addition, it will be an ideal supplementary text for graduate and undergraduate ecology courses.

Jianguo Liu is an Associate Professor at Michigan State University where he teaches and researches in the areas of landscape ecology and biodiversity conservation. He has published extensively in scientific journals such as *Science* and has edited two other ecology books. In recognition of his contributions to research and teaching, he has been given a number of awards including a CAREER award from the National Science Foundation, a Lilly Teaching Fellowship, and an Aldo Leopold Leadership Fellowship from the Ecological Society of America.

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Cover image: The Wolong Nature Reserve in China, one of the largest reserves designated for conserving the giant pandas and other natural resources. Several elements of landscape structure and function are shown illustrating direct and indirect human impacts on landscape integrity. Changes in the reserve landscape demonstrate the importance of coupling landscape ecology with human demography and socioeconomics for better understanding and sustainable management of natural resources from multi-scale, cross-boundary, adaptive, and integrated approaches. *Photograph by Marc Linderman.*

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