Record Nr. UNINA9910559385603321 Autore Wiersma Yolanda F (Yolanda Francine), <1973-> Titolo Experimental Landscape Ecology [[electronic resource] /] / by Yolanda F. Wiersma Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2022 **ISBN** 9783030951894 9783030951887 Edizione [1st ed. 2022.] Descrizione fisica 1 online resource (229 pages) Collana Landscape Series, , 1875-1210 ; ; 29 Disciplina 574.5072 Soggetti Landscape ecology Applied ecology Research - Methodology **Ecology** Ecologia del paisatge Investigació Metodologia de la ciència Llibres electrònics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Part I. Introduction -- Part II. Philosophy and Concepts of Experimentation -- Part III. Approaches to Experimentation -- Part IV. Conclusion -- Part V. Resources. . Sommario/riassunto This book offers the first guide to landscape ecologists on the art and science of doing experiments, both observational and manipulative. How do you conduct an experiment when your study subject is as big as a landscape? Issues of scale, spatial heterogeneity and limitations on

replication may challenge scientists seeking to carry out robust experiments in landscape ecology. Beginning with an overview of the

history and philosophy of the scientific method, and tracing the

development of experimental approaches in ecology broadly, the first half of the book discusses the broader issues of what makes a good experiment. Individual chapters describe unique aspects of landscape ecology that present challenges to experimentation, with suggestions for solutions on issues of scale, and how to apply controls, randomization and adequate replication in a landscape setting. The second half of the book describes different kinds of landscape ecology experimental approaches including large-scale manipulations experimental model landscapes mesocosms and microcosms in silico experiments novel landscapes Each chapter describes the advantages and disadvantages of each approach, and identifies the types of landscape ecology concepts and questions that a research can address. Examples from around the world, in a myriad of different environments, help to illustrate the ideas in each chapter. Together with an annotated resources section, this book aims to stimulate ideas and inspire creativity for graduate students and early career researchers who want to conduct better experiments in landscape ecology.