

## Decision-Making in Conservation and Natural Resource Management

Making decisions about the management and conservation of nature is necessarily complex. There are typically many competing pressures on natural systems, opportunities and benefits for different groups of people and a varying, uncertain social and ecological environment. An approach which is narrowly focused on either human development or environmental protection cannot deliver sustainable solutions.

This volume provides frameworks for improving the integration of natural resource management with conservation and supporting stronger collaboration between researchers and practitioners in developed and developing countries. Novel approaches are required when ecological and social dynamics are highly interdependent. A structured, participatory, model-based approach to decision-making for biodiversity conservation has been proven to produce real-world change. There are surprisingly few successful case studies, some of the best are presented here. Researchers and practitioners need this interdisciplinary approach, focused on quantitative tools that have been tested and applied.

NILS BUNNEFELD is an Associate Professor at the University of Stirling. His research focuses on the interaction between people and nature with an emphasis on mathematical and statistical modelling. In 2016, he was awarded a 5-year European Research Council Starting Grant (ConFooBio) on resolving conflicts between food security and biodiversity conservation.

EMILY NICHOLSON is a Senior Lecturer at Deakin University, Australia. Her research focuses on solving critical conservation problems and measuring change in biodiversity. Her work has helped to develop a new framework for assessing risks to ecosystems, the Red List of Ecosystems, adopted as the global standard by the International Union for the Conservation of Nature (IUCN).

E. J. MILNER-GULLAND is Tasso Leventis Professor of Biodiversity at the University of Oxford. In 2014 she was awarded a Pew Marine Fellowship on the use of novel approaches to addressing marine bycatch. Her ethos is to ensure that all the research she does is addressing issues identified by practitioners, and is carried out collaboratively with end-users.

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Edited by Nils Bunnefeld, Emily Nicholson, E. J. Milner-Gulland

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# Decision-Making in Conservation and Natural Resource Management

*Models for Interdisciplinary Approaches*

*Edited by*

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*To the conservationists of the future*

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We dedicate this book to the conservationists of the future, who face the daunting task of reconciling the increasingly difficult and urgent needs of both humanity and the environment, so that we can continue to live well with nature. We hope that this book is helpful to their efforts.