



TELECOUPLING

Exploring Land-Use Change
in a Globalised World

EDITED BY CECILIE FRIIS AND
JONAS Ø. NIELSEN

Palgrave Studies in
**NATURAL RESOURCE
MANAGEMENT**



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Editors

Telecoupling

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Series Editor Foreword

The World Bank's definition of Natural Resource Management (NRM) is:

The sustainable utilization of major natural resources, such as land, water, air, minerals, forests, fisheries, and wild flora and fauna. Together, these resources provide the ecosystem services that underpin human life.

NRM covers a very wide range of interwoven resource areas, management processes, threats and constraints, including aquatic ecosystems, natural resources planning and climate change impacts. Similarly, NRM professionals are very diverse in their qualifications and disciplines.

There is a significant and growing sector for NRM services and the worldwide market for this sector was almost \$30 billion in 2015, according to *Environment Analyst*.

This book series will have a focus on applied, interdisciplinary and cross-sectoral approaches, bringing together professionals to publish titles across the global sector.

The series will focus on the management aspects of NRM and titles will cover:

- Global approaches and principles
- Threats and constraints
- Good (and less good) practices

- Diverse and informative case study material from practitioners and applied managers
- Cutting-edge work in the discipline

The issues covered in this series are of critical interest to advanced-level undergraduates and masters students, as well as industry professionals, investors and practitioners.

Series Editor
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Preface

This book is the result of five years of working together on the topic of telecoupling. During this period we have experienced how telecoupling research has moved from being something that had to be explained and often defended to now being an established part of land system science. This has been a challenging, fun, and insightful journey.

In this book, we bring leading experts on telecoupling and land use together to systematically reflect upon the relevance of telecoupling research for understanding global land-use change. We are grateful that all authors approached agreed to partake. Discussing, reviewing, and editing their chapters has been a real pleasure and a very insightful experience. The result is a very strong book with state-of-the-art research relevant to students from many different disciplines as well as to early-career and experienced scientists. We believe this book provides a benchmark from which we can move forward with telecoupling research.

Written in a clear, concise, and approachable language, the volume is divided into three sections: *Overview*, *Topics*, and *Agenda*, framed by a general introduction that presents the individual chapters. The *Overview* section provides a coherent presentation of the field of telecoupling research and describes the emergence of the concept in land systems science, how it is currently understood, and how causal explanation can be derived with a telecoupling approach. In *Topics*, the telecoupling concept is used in nine chapters to analyse some of the most pressing concerns of

contemporary global land-use change. In the *Agenda* section, the book widens the scope, illustrating how telecoupling research connects to contemporary scientific pursuits for inter- and transdisciplinary research. Interspersed within the *Topics* section of the book are four so-called *Toolboxes*. Covering flow, network, spatial, and qualitative methodological approaches, the *Toolboxes* provide the reader with a sense of how to do telecoupling research. All the chapters stand alone and can be read individually, but build and expand upon each other. Reading the book in its entirety will therefore be rewarding.

This book would not have been possible without the support of Rachael Ballard and Joanna O'Neill at Palgrave Macmillan. Kathrin Trommler provided very valuable work editing and assembling the book at the end. The reviewers provided excellent and fast reviews that improved all chapters. We are grateful to the people working at and around the IRI THESys at Humboldt-Universität zu Berlin, for engaging us in many great and challenging discussions on telecoupling. Indeed, Berlin is a wonderful and dynamic hub for land-use and land-cover research, as highlighted by the large number of contributors to this book from Humboldt-Universität zu Berlin's Geography Department—a department we are very fortunate to belong to. The Global Land Programme (GLP) provided us with the network needed to do an edited volume on land-use change and we are looking forward to continuing working together with the GLP on the issue of telecoupling. Last but not least, we extend a big *thank you* to all the contributing authors. We feel very privileged to be the editors of a book with such high-quality contributions from all of you. For economic support, we would like to acknowledge the generous funding from the European Union's Horizon 2020 research and innovation programme under Marie Skłodowska-Curie grant agreement no. 765408.

Berlin, Germany
November 2018

Cecilie Friis
Jonas Ø. Nielsen

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