NomosTextbook

Kropp | Sonnberger

Environmental Sociology

Nomos

NomosTextbook

The textbook series presents selected topics from the social sciences and humanities program. Published are outstanding topics relevant to English-language teaching from all program areas, such as political science, sociology, social work, or media and communication studies. The selection of books is based on the curricula of the respective disciplines. Renowned experts provide a compact introduction to the topics of the respective subject.

Cordula Kropp | Marco Sonnberger

Environmental Sociology

Nomos

This English edition is based on the book “Umweltsoziologie”, Nomos 2021, ISBN 978-3-8487-5035-1. Parts of the translation into English were created with support of machine translation and/or artificial intelligence.

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at http://dnb.d-nb.de

1st Edition 2025

Published by
Nomos Verlagsgesellschaft mbH & Co. KG
Waldseestraße 3–5 | 76530 Baden-Baden
www.nomos.de

Production of the printed version:
Nomos Verlagsgesellschaft mbH & Co. KG
Waldseestraße 3–5 | 76530 Baden-Baden

ISBN 978-3-7560-1248-0 (Print)
ISBN 978-3-7489-1789-2 (ePDF)
DOI https://doi.org/10.5771/9783748917892

Online Version
Nomos eLibrary

Foreword

As we completed our work on the English version of this introduction to environmental sociology in October 2024, media reports were filled with news of escalating disasters. In Spain, torrential rains had just caused flash floods, resulting in more than 200 deaths, Australia saw its hottest September in record, with temperatures 3°C above the long-term average, causing health problems for both human and non-human beings. Globally, summer 2024 was the Earth's hottest on record, and in August 2024, the average land temperature in Europe was 1.57°C above the 1991-2020 average, according to the Copernicus Climate Change Service. In 2023, nature's carbon sink failed for the first time, with trees, plants and soil showing almost no net absorption of carbon dioxide emissions due to enormous forest fires and rising sea temperatures. In Canada alone, 6,623 wildland fires had burned more than 15 million hectares of managed forests. "We're seeing cracks in the resilience of the Earth's systems … the oceans showing signs of instability"[1] said Johan Rockström, director of the Potsdam Institute for Climate Impact Research, about these phenomena, which are not yet factored into climate models. Extreme weather events have already become part of our normality, and local governments around the world are urgently developing climate adaptation strategies to keep cities habitable. In each of these regions, institutions struggle to manage climate impacts, highlighting a troubling lack of preparedness and action capacity. At the same time, continuous updates of the planetary boundaries framework in Earth sciences' find that six of the nine boundaries are transgressed, "suggesting that Earth is now well outside of the safe operating space for humanity" (Richardson et al. 2023: 1). Now more than ever, future generations must confront the urgent task of reimagining lifestyles and economic practices, working towards their sustainable transformation. We believe that environmental sociology has a great deal to offer in this endeavor. This textbook is particularly relevant for students in social sciences—sociology, political and communication sciences, human geography, psychology—where an understanding of environmental sociology has become essential for a well-rounded education that meets today's needs.

With this in mind, we hope this English translation of our introduction to environmental sociology reaches a broad audience. Our goal is to provide students and other interested readers with a comprehensive overview of key theories and research in this essential field. The book offers a theoretical and thematic guide to the major issues and approaches in environmental sociology. While our coverage, based in Germany's long tradition in environmental sociology, is necessarily selective, we aim to present foundational theories alongside both classical and current research areas. To assist in learning, each chapter includes a brief introductory summary and a closing overview of the chapter's key points. Each chapter also provides a list of recommended readings with brief annotations. Designed to be suitable for use in both seminars and lectures, as well as for independent study, we hope the book serves as a valuable resource.

1 Source: The Guardian, https://www.theguardian.com/environment/2024/oct/14/nature-carbon-sink-collapse-global-heating-models-emissions-targets-evidence-aoe, accessed on 31.10.2024.

We extend our gratitude to our colleagues at the Department of Technology, Risk and Environment at the University of Stuttgart and the Center for Interdisciplinary Risk and Innovation Research at the University of Stuttgart (ZIRIUS) for their insightful discussions and constructive feedback. We are grateful to work in such an inspiring environment! We thank the student assistants Hanna Sophie Mast, Lukas Günsch, Lena Ebersbach and Amelie Dresel for their invaluable help with proofreading and formatting both the German and English versions of the book. Our thanks also go to Alexander Hutzel, Eva Lang and Fabiola Valeri of Nomos Publishing for their assistance with the publication.

Munich/Stuttgart, October 2024

Cited literature:

Richardson, K., W. Steffen, W. Lucht, J. Bendtsen, S.E. Cornell, J.F. Donges et al., 2023: Earth beyond six of nine planetary boundaries. Science advances, 9 (37): eadh2458.

Table of Contents

Foreword 5

List of Figures 11

List of Tables 12

Chapter 1: Introduction – The social recognition of environmental problems 13

1. Environment and nature as objects of scientific observation 14
2. Environment and nature as objects of social appropriation 15
3. Environment and nature as subjects of environmental sociology 17
4. Theoretical perspectives of environmental sociology 19
5. The development of environmental sociology 20
6. The challenges facing environmental sociology in the Anthropocene 23

Chapter 2: The social construction of nature and the environment 29

1. The social construction of nature: the importance of concepts of nature in everyday knowledge 31
2. "Nature" in systems theory: environmental communication in social subsystems 35
3. Changes in the social construction of nature 38
4. Social understandings of nature, sustainable development and the Anthropocene 41
5. The social construction of nature and its political implications 44

Chapter 3: Theories of society-nature relations 47

1. Nature relations – a look at the modern dualistic perspective on the relationships between human and non-human agents 49
2. Dichotomous theories: Different dynamics, co-evolution and interaction in society-nature relations 53
   - 2.1. The concept of societal relations to nature 53
   - 2.2. Nature relations and the socio-ecological regime 58
   - 2.3. Summary: Society-nature relations and their difficult transformation 59
3. Relational theories: Fluid relations, contested assemblages, and intra-action in nature relations 60
   - 3.1. Stories, figurations and the diversity of kinships in Donna Haraway's work 62
   - 3.2. Actor networks, propositions and associations in Bruno Latour's work 66
   - 3.3. Agential realism and intra-action in Karen Barad's work 72

Chapter 4: Environmental attitudes and actions 77

1. Environmental awareness in attitudinal and behavioural research 77
   - 1.1. The conceptual basis of environmental awareness 78
   - 1.2. The empirical assessment of environmental awareness 79
   - 1.3. Empirical findings on environmental awareness and environmental action 82
   - 1.4. The gap between environmental awareness and environmental action 83
2. Social order and myths of nature – The Cultural Theory perspective 86
   - 2.1. The grid-group scheme 87
   - 2.2. Myths of nature 89

2.3. Criticism of Cultural Theory 91
3. Moral appeals to environmental awareness and the problem of responsibilisation 92

Chapter 5: Risk and conflicts about risk 97

1. Risk perception and defining risks 99
2. The sociological theory of risk 104
   2.1. The risk society by Ulrich Beck 104
   2.2. Risks and ecological communication in the work of Niklas Luhmann 106
   2.3. The co-production of risky networks in the work of Bruno Latour 108
3. The criticality of new types of systemic risk situations 111
4. The relationship between global environmental risks and large-scale technical systems 115

Chapter 6: The environmental movement and environmental conflicts 119

1. The environment as an area of conflict 121
2. Theories of social movements 123
   2.1. Resource mobilisation theory 123
   2.2. Framing 124
   2.3. The theory of political opportunity structures 125
3. The structure and progress of the environmental movement 125
   3.1. A brief history of the environmental movement 125
   3.2. Frames of the environmental movement: Conservation, environmental protection and ecology 128
   3.3. The structural features of the environmental movement 129
   3.4. The social and political impact of the environmental movement 131
4. Outlook 132

Chapter 7: Sustainable consumption 137

1. What is (sustainable) consumption? 137
2. People as rational decision-makers 141
3. The symbolic dimension of consumption 142
4. Practices of everyday consumption 145
5. Outlook 147

Chapter 8: Sustainable innovations and transformation processes 153

1. The guiding principle of sustainable development 153
2. Sustainable innovations 154
3. Theories about the routinisation of innovation 156
4. Innovation networks and alliances 160
5. Innovations and the different levels involved in the transformation of unsustainable practices 163
6. Outlook 167

Chapter 9: Infrastructure systems – A determining factor in society-nature relations 171

1. Characteristics of infrastructures 172
2. Infrastructures and their forces of inertia 176
3. Conflicts related to infrastructuring 181
4. Outlook 186

Chapter 10: Transdisciplinarity in environmental sociological research 191

1. The origins of the concept of transdisciplinarity 192
2. New forms of knowledge production: Mode 2 and post-normal science as conceptual foundations of transdisciplinarity 194
   2.1. Mode 2 194
   2.2. Post-normal science 197
   2.3. Criticism of Mode 2 and post-normal science 201
3. Transdisciplinarity as a research principle of social ecology 202
4. Transformative science and real-world laboratory research 205
5. Outlook 207

Index 213

List of Figures

Figure 1: Environment and society understood through a scientific/technical lens 16

Figure 2: Societies and their environments, diachronic development and synchronic diversity 20

Figure 3: Interaction between society-nature relations in dialectical approaches 51

Figure 4: Society-nature relations as socio-ecological regulatory patterns or regimes 57

Figure 5: Relational co-evolution of variable elements in hybrid contexts 61

Figure 6: The grid-group scheme 88

Figure 7: Location of the myths of nature in the grid-group scheme 90

Figure 8: Simplified illustration of the effects of social amplification 103

Figure 9: Phases of the consumption process 138

Figure 10: Diffusion process, depicted as an S-curve according to Rogers 157

Figure 11: Network-like innovation processes 161

Figure 12: Transition processes from the multi-level perspective (MLP) 164

Figure 13: Forms of knowledge production and problem solving 199

Figure 14: The typology of experimentation 206

List of Tables

Table 1:	The NEP scale	80
Table 2:	General environmental awareness scale	81
Table 3:	Comparison of Mode 1 and Mode 2	195