Contents

List of Contributors *page* ix
Acknowledgements xi

Part I Introduction 1

1 The Planetary Boundaries: Thinking across Science and Ethics 3
JEREMY J. SCHMIDT

Part II Stratospheric Ozone Depletion 23

2 Introduction to the Stratospheric Ozone Depletion Boundary 25
SIMON P. MEISCH

3 The Planetary Boundary on Stratospheric Ozone Depletion and the Evolution of Values under the Ozone Regime 28
LOUISE DU TOIT

4 Are Ozone's Relationships of Normative Importance? 42
CHRISTINE WINTER

Part III Climate Change 53

5 Introduction to the Climate Change Boundary 55
SIMON P. MEISCH

6 Climate Boundaries and Border Crossers 58
MIRIAM GAY-ANTAKI

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 14 Nov 2026 at 11:38:43, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009443586

7 An Arctic Bounded by Whiteness: Ethics of Amplification 68
TANGUY SANDRÉ AND JEANNE-MARIE GHERARDI

Part IV Biosphere Integrity 81

8 Introduction to the Biosphere Integrity Boundary 83
SIMON P. MEISCH

9 Ethical Perspectives on Biodiversity as Planetary Boundary 86
UTA ESER

10 Inter-species Justice and the Right to Thrive: Biodiversity in Crisis in Aotearoa New Zealand 98
MAKERE STEWART-HARAWIRA

Part V Land System Change 115

11 Introduction to the Land System Change Boundary 117
SIMON P. MEISCH

12 A Transformative Multispecies Land Use Ethic for the Amazon 120
JOANA CASTRO PEREIRA AND CARLOTA HOUART

13 In Conversation with a Land: Extracts from the Pianpicollo Diary 132
ALICE BENESSIA

Part VI Freshwater Change 143

14 Introduction to the Freshwater Change Boundary 145
JEREMY J. SCHMIDT

15 The Role of the Planetary Boundaries Framework in Water-Related Management and Policy Decisions 148
NEELKE DOORN

16 Navigating Pathways to Just Water Futures? A Hydrosocial Engagement with the Planetary Boundaries Framework 159
NICOLE J. WILSON

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 14 Nov 2026 at 11:38:43, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009443586

Part VII Biogeochemical Flows 173

17 Introduction to the Biogeochemical Flows Boundary 175
JEREMY J. SCHMIDT

18 Food Fight: Moving beyond Wizards vs Prophets to Achieve a Sustainable Phosphorus System 178
JAMES ELSER

19 Between Justice and Food Security: Planetary Legacies of Mining Phosphate Islands 186
KATERINA TEAIWA

Part VIII Ocean Acidification 201

20 Introduction to the Ocean Acidification Boundary 203
SIMON P. MEISCH

21 How Can We Curb Ocean Acidification in a Time of Multiple Competing Crises? 205
RACHEL HAUG FOSSBAKK

22 Environmental Ethics and the Case of Ocean Acidification 217
KONRAD OTT

Part IX Atmospheric Aerosols 233

23 Introduction to the Atmospheric Aerosols Boundary 235
JEREMY J. SCHMIDT

24 The Ethics of Clean Air Governance: A Legal Perspective on the Atmospheric Aerosol Loading Planetary Boundary 238
LESLIE-ANNE DUVIC-PAOLI

25 The End of Experimentation: Geoengineering and Planetary Boundaries 250
JEREMY J. SCHMIDT

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 14 Nov 2026 at 11:38:43, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009443586

Part X Novel Entities 261

26 Introduction to the Novel Entities Boundary 263
JEREMY J. SCHMIDT

27 Novel Entities as a Planetary Boundary: Ethical Considerations 266
ANDREAS BACHMANN AND ARIANE WILLEMSEN

28 The Crisis of Planetary Narratives: A Conversation with Erle Ellis 278
ERLE ELLIS

Part XI Conclusion 291

29 The Planetary Boundaries: Knowing What the Question Is 293
SIMON P. MEISCH

Index 311

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 14 Nov 2026 at 11:38:43, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009443586