# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>xi</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>xv</td>
</tr>
<tr>
<td><strong>PART I CONTEXT, TOOLS AND SYSTEMS</strong></td>
<td>1</td>
</tr>
<tr>
<td>1 Adaptation and the Paris Agreement</td>
<td>3</td>
</tr>
<tr>
<td>1.1 The Global Context</td>
<td>3</td>
</tr>
<tr>
<td>1.2 The Climate Convention</td>
<td>5</td>
</tr>
<tr>
<td>1.3 Experimentalist Governance</td>
<td>7</td>
</tr>
<tr>
<td>1.4 Experimentalism, Sustainability and Systems Thinking</td>
<td>10</td>
</tr>
<tr>
<td>1.5 The Paris Agreement</td>
<td>13</td>
</tr>
<tr>
<td>1.6 Design of the Book</td>
<td>21</td>
</tr>
<tr>
<td>2 Chaos and Climate Emergency</td>
<td>25</td>
</tr>
<tr>
<td>2.1 Birth of the Anthropocene</td>
<td>25</td>
</tr>
<tr>
<td>2.2 ‘War’ with Nature</td>
<td>26</td>
</tr>
<tr>
<td>2.3 Goals of the Peace</td>
<td>29</td>
</tr>
<tr>
<td>2.4 Ecological Risk</td>
<td>30</td>
</tr>
<tr>
<td>2.5 Tipping Points</td>
<td>31</td>
</tr>
<tr>
<td>2.6 Local Risks</td>
<td>37</td>
</tr>
<tr>
<td>2.7 The Climate Emergency</td>
<td>40</td>
</tr>
<tr>
<td>2.8 The Politics of Climate Chaos</td>
<td>42</td>
</tr>
<tr>
<td>2.9 Signs of a Zeitgeist Shift</td>
<td>43</td>
</tr>
<tr>
<td><strong>PART II UNDERSTANDING CLIMATE CHAOS</strong></td>
<td>59</td>
</tr>
<tr>
<td>3 Systems, Climate and Ecology</td>
<td>61</td>
</tr>
<tr>
<td>3.1 Systems and Chaos</td>
<td>61</td>
</tr>
<tr>
<td>3.2 Climate and Climate Change</td>
<td>62</td>
</tr>
<tr>
<td>3.3 Climate Change and Reference Languages</td>
<td>64</td>
</tr>
</tbody>
</table>
## CONTENTS

3.4 Anthropology and Social Systems 70
3.5 Ecology and Ecological Systems 72
3.6 Understanding Adaptation 74
3.7 Ecological Systems and Biodiversity 84
3.8 Social Systems and Culture 86
3.9 Adaptation, Resilience, Resistance and Flexibility 88

4 Making Systems Stronger 90
4.1 Dunbar Groups 90
4.2 The Strength and Dissolution of Systems 91
4.3 Complexity and Strength 94
4.4 Influences on Strength and Fragility 99
4.5 Origins of System Strength 101
4.6 Investing in System Strength 103
4.7 Levels of Society 103
4.8 Algorithms of Adaptation 106

PART III PRACTICAL SYSTEM STRENGTHENING 109

5 Community Forest User Groups in Nepal 111
5.1 Historical Context 111
5.2 The Denmark–Nepal Relationship 113
5.3 NARMSAP (1998–2005) 116
5.4 Nepal’s Own ‘Country Programme’ 122
5.5 Lessons from Nepal 125

6 Community Land Titling in Bolivia 128
6.1 Historical Context and the Start of Danida Involvement 128
6.2 Indigenous Peoples’ Lands, Rights and Languages 134
6.3 Net Results and Political Transitions 138
6.4 Lessons from Bolivia 146
## Table of Contents

### 7 Coastal Zone and Community Planning in Zanzibar  
7.1 Tropical Islands, Coasts and Climate Change  
7.2 The ZAN-SDI Project  
7.3 The Institutional System for Spatial Planning  
7.4 Lessons from Zanzibar  

### 8 Liveable and Sustainable Cities  
8.1 Air Quality in the Kathmandu Valley  
8.2 Self-organised Urban Communities  
8.3 Sustainable Cities?  

### PART IV GLOBAL PERSPECTIVES  

### 9 Changing Ideas of Adaptation  
9.2 Adaptation Markers, 2009–2010  
9.3 Diverse Frameworks, 2010–2014  
9.4 Knowledge Concerns, 2014–2015  
9.5 Adaptation Research after Paris  
9.6 Ideas of Adaptation Aid  
9.7 Adaptation Aid before and after Paris  
9.8 Developmental Delay in the Adaptation Agenda  

### 10 Learning from the Adaptation Communications  
10.1 Analysis of the Earliest NDCs  
10.2 Ecosystems and Communities in the First NDCs  
10.3 Ecosystem-Based Adaptation in 2015–2020  
10.4 Community-Based Adaptation in 2015–2020  
10.5 The Growth of System-Based Adaptation  
10.6 Changes in System-Based Approaches between 2015 and 2020
# Table of Contents

## 11 Adaptation in Specific Geographies 246

- 11.1 Adaptation in the European Union 246
- 11.2 Adaptation in Small Island States 255
- 11.3 Adaptation in Africa 266
- 11.4 Adaptation in the Americas 274

## PART V CONCLUSIONS 277

## 12 Designing and Evaluating Adaptation Investments 279

- 12.1 Assessing Generic Design Quality 279
- 12.2 Designing for Adaptive Performance 282
- 12.3 Scoring Design and Performance Using Evidence 284
- 12.4 Telling ‘before and after’ and Contribution Stories 289
- 12.5 Comparing Projects and Portfolios 289
- 12.6 Criteria for Evaluating Generic Performance 294
- 12.7 Special Factors in Evaluating Adaptive Performance 294
- 12.8 Co-benefits of Local System Strengthening 301

## 13 Adaptive Thinking, Feeling and Acting 308

- 13.1 Mitigation as a Type I Issue 308
- 13.2 Mitigation as a Type II Issue 308
- 13.3 Adaptation as a Type III Issue 311
- 13.4 Hope and Purpose 313
- 13.5 Peace with Nature 314
- 13.6 Take-Home Messages 317

List of Abbreviations and Acronyms 324

References 327

Index 374

Colour plates can be found between pages 208 and 209.