

Contents

Authors of boxes, vii
Preface, x
Acknowledgments and permissions, xiii

Section I: Issues and mechanisms, 1

Chapter 1 Conservation issues, 3

- 1.1 Introduction, 3
- 1.2 Primary issues, 3
- 1.3 Secondary issues, 10
- 1.4 Tertiary issues, 22
- 1.5 Conclusion, 26

Chapter 2 Mechanisms, 27

- 2.1 Introduction, 27
- 2.2 Species and habitat conservation, 27
- 2.3 Governance, 32
- 2.4 New directions, 44
- 2.5 Agents of change, 46
- 2.6 Conclusion, 56

Section II: Science, 57

Chapter 3 The coastal-realm ecosystem, 59

- 3.1 Introduction, 59
- 3.2 Global dynamics, 59
- 3.3 Defining attributes, 62
- 3.4 Physical components, 67
- 3.5 Biotic land-seascapes, 76
- 3.6 Coastal-realm properties, 78
- 3.7 The coastal realm: a complex ecosystem, 83
- 3.8 Conclusion, 89

Chapter 4 Natural history of coastal-marine organisms, 91

- 4.1 Introduction, 91
- 4.2 Diversity of coastal-realm life, 91

- 4.3 Life in water, 95
- 4.4 Life-history diversity, 100
- 4.5 Biological assembly, 113
- 4.6 Patterns, 115
- 4.7 Biogeography and environmental classification, 122
- 4.8 Conclusion, 123

Section III: Case studies, 127

Chapter 5 Chesapeake Bay: estuarine alteration and restoration, 133

- 5.1 Introduction, 133
- 5.2 Characteristic features of Chesapeake Bay, 133
- 5.3 Ecosystem properties under biotic control, 138
- 5.4 Humans: force and magnitude of change, 155
- 5.5 Assessing ecosystem condition, 163
- 5.6 Restoration: the Chesapeake Bay Program, 169
- 5.7 Conclusion, 170

Chapter 6 Bering Sea: marine mammals in a regional sea, 172

- 6.1 Introduction, 172
- 6.2 Physical setting, 173
- 6.3 Biotic relationships, 177
- 6.4 Historical exploitation of Beringian marine mammals, 180
- 6.5 Steller sea lion, *Eumetopias jubatus*, 182
- 6.6 Pacific walrus, *Odobenus rosmarus divergens*, 189
- 6.7 Conclusion, 202

Chapter 7 The Bahamas: tropical-oceanic island nation, 205

- 7.1 Introduction, 205
- 7.2 Process and pattern, 206
- 7.3 Natural resource conservation issues, 214
- 7.4 Roots of conservation in social history, 227

7.5 Conservation for sustainability, 228

7.6 Conclusion, 235

Section IV: Analysis and synthesis, 239

Chapter 8 Coastal-realm change, 241

8.1 Introduction, 241

8.2 Accounting for change, 241

8.3 Conservation issues, 245

8.4 The human-dominated coastal realm, 259

8.5 Conclusion, 263

Chapter 9 Synthesis, 265

9.1 Introduction, 265

9.2 The rise of coastal-realm conservation, 266

9.3 Present challenges for coastal-realm conservation, 269

9.4 Strategies for coastal-realm conservation, 285

9.5 Conclusion, 289

Citations and suggested readings, 291

Index, 316