List of tables xviii List of maps xix Preface xxiii Acknowledgements xxvi Table of cases xxix Table of treaties and instruments xxxiv

# Equity revisited: an introduction 1

- I. The renaissance of equity
  - A. New frontiers 1
  - B. Traditional functions and the decline of equity
  - C. The rebirth of equity in the law of natural resources 16

1

8

# II. The quest for global equity 21

- A. The programmatic function of equity 22
- B. The impact of sovereignty and self-determination 25

# III. The legal nature of equity 28

- A. Different layers 28
- B. A source of new legal principles 29
- C. Ambivalence and the need for context 31
- D. The impact of different schools 34
- IV. Conclusion 39

# PART I Context: the enclosure of the seas 43

# 1 The silent revolution 45

- I. The partition of the seas 45
- II. Conferences, conventions, and customary law49A. UNCLOS I, II and the Geneva Conventions49

vii

59

- B. UNCLOS III and the LOS Convention 50
- C. Multiple sources of law
- D. A historical perspective 63
- 2 The new maritime zones: evolution and legal foundations 67
  - I. Horizontally shared zones and quasi-territoriality 67

# II. The continental shelf zone 70

- A. Description and development 70
- B. The scope of shelf rights
- C. The foundation and legal nature of shelf rights 77
  - 1. The concept of natural prolongation of the territory of the coastal state 77

74

- 2. Distance: close relationship of the coastal state to offshore marine spaces 92
- D. Summary and conclusions 101
- III. The exclusive economic zone 104
  - A. Description and development 104
  - B. The foundation and legal nature of EEZ rights 111
    - Permanent sovereignty over natural resources and the close relationship of the coastal state to offshore marine spaces 111
    - 2. Customary law 114
  - C. The scope of EEZ rights 116
    - 1. State practice and customary law 116
    - 2. The LOS Convention 118
- IV. The relationship of the continental shelf and the EEZ 121
  - A. Divergencies 121
  - B. Convergencies: towards a single homogeneous zone 122
  - C. Summary and conclusions 125
    - 1. Towards a presumption of single maritime boundaries 125
    - 2. Exceptions: diverging boundaries 128
- 3 Distributive effects of the enclosure movement: an assessment of global equity 130
  - I. The quest for global equity in maritime law 130
  - II. The allocation of marine spaces 140

viii

- A. The main beneficiaries 140
- B. The position of land-locked and geographically disadvantaged states 143
  - 1. Mineral resources 144
  - 2. Living resources: the concept of equitable surplus allocation 146
- III. Developments in fisheries production and market shares 153
- IV. Conservation and management equity towards sustainable use 161
- V. Structural limits to equitable sharing in contemporary international law 170
- PART II The new boundaries 177
- 4 Approaches to delimitation 179
  - I. The basic dilemma 179
  - II. Technical and scientific methods of delimitation 182
    - A. Geometrical and geographical methods 183
      - 1. The method of equidistance or median line 184
      - 2. The bisector method 191
      - Perpendicular to the general direction of the coastal line 195
      - 4. The extrapolation of the land boundary 196
      - 5. Parallel lines (corridors) 197
      - 6. Enclaving 197
      - 7. Annex: problems of scale distortions 198
    - B. Geological and ecological methods (natural boundaries) 199
      - 1. Practical problems of scientific evidence 200
      - 2. Theoretical and legal issues 202
  - III. Competing legal approaches to delimitation 204
    - A. Four regulatory models 204
      - 1. The model of juridical vacuum (*ex aequo et bono*) 205
      - 2. The model of equity and equitable principles 206
      - The model of residual rules and exceptions (equidistance or median line) 208

- 4. Equidistance v. equity: the model of agreed equitable solutions based on international law 213
- IV. Conclusions 233

## 5 State practice 236

- I. Unilateral acts (proclamations and legislation) 236
  - A. Continental shelf 236
  - B. Fisheries and exclusive economic zones 238
- II. Maritime boundary delimitation agreements 242
  - A. Indications in agreements 243
  - B. Models and methods applied 244
  - C. The impact of the 1958 Shelf Convention equidistance-special circumstances rule 245
  - D. Assessment and former studies 246
  - E. Protracted negotiations 250

### III. The functional approach in co-operation agreements 252

- A. The model of revenue sharing and compensation 257
- B. The model of shared jurisdiction in boundary area pending exploration 258
- C. The model of long-lasting zones overlapping a boundary line 259
- D. The model of common zones under joint administration 261
- E. The potential and limits of co-operation and package deals 266

# 6 Judicial and conciliatory settlements 271

# I. Introductory 271

- II. Claims and results in legal proceedings 272
  - A. The 1969 North Sea Continental Shelf cases 272
  - B. The 1977/78 Anglo-French Channel arbitration 275
  - C. The 1981 Arbitration concerning the Border between the Emirates of Dubai and Sharjah 279
  - D. The 1982 and 1985 *Tunisia* v. *Libya Continental Shelf* cases 281
  - E. The 1984 Canada v. United States Gulf of Maine case 285
  - F. The 1985 Guinea v. Guinea-Bissau arbitration 290
  - G. The 1985 Libya v. Malta Continental Shelf case 294
  - H. The 1992 Canada v. France St. Pierre and Miquelon arbitration 297

- I. The 1992 Land, Island and Maritime Frontier Dispute (El Salvador v. Honduras) 300
- J. The 1993 Jan Mayen case (Denmark v. Norway) 303
- K. The 1999 Eritrea v. Yemen award 306
- L. The 2001 Case Concerning Maritime Delimitation and Territorial Questions (Qatar v. Bahrain) 311
- M. The 2002 Case Concerning the Land and Maritime Boundary (Cameroon v. Nigeria) 315
- N. The 2006 Barbados v. Trinidad and Tobago award 318
- O. The 2007 Guyana v. Suriname Award 321
- P. The 2007 Territorial and Maritime Dispute (Nicaragua v. Honduras) 324
- Q. The 2009 Case Concerning the Maritime Delimitation in the Black Sea (Romania v. Ukraine) 327
- R. The 2012 Bay of Bengal (Bangladesh v. Myanmar) case 332
- S. The 2012 Territorial and Maritime Dispute (Nicaragua v. Colombia) 336
- T. The 2014 Maritime Dispute (Peru v. Chile) 338
- III. Claims and Results in Domestic and Quasi-judicial Proceedings 341
  - A. The 1979 United States CEIP Delimitation Recommendations 341
  - B. The 1981 Jan Mayen Ridge Conciliation 344
  - C. The 2002 Arbitration between Newfoundland and Labrador and Nova Scotia 346
- IV. Assessment 348

C.

- A. Individuality of configurations 348
- B. The importance of the compromis (special agreement) 349
  - Claims and the role of equidistance 350
- D. Geometrical constructions and results 352
- E. The common basis of equity 352
- 7 An assessment of customary law 354
  - I. The state of play in customary law 354
    - A. The prohibition of unilateral delimitation 357
    - B. The absence of a duty to negotiate boundaries 358
    - C. The absence of specific customary rules for shelf and EEZ delimitation 359
      - 1. The model of residual rules and exceptions (equidistance-special circumstances) 359

<ol> <li>The model of equitable prine</li> <li>Other methods and legal app</li> <li>Customary obligation to ach</li> <li>Customary obligation of mu</li> </ol>	proaches 365 ieve an equitable solution 365	
II. The potential and limitation of equidistance 369		
PART III Delimitation based on equity 373		
The rule of equity 375		
<ul> <li>I. The rationale of equity and equit</li> <li>A. Corrective or autonomous equit</li> <li>B. The inherent need for underlyin</li> <li>C. The normative level of equitable</li> <li>D. A closer look at equidistance-sp</li> <li>1. A clear and simple model?</li> <li>2. A more predictable model?</li> <li>3. The shortcomings of an equit</li> <li>E. The roots of the controversy: jurt theory 389</li> <li>F. The appropriateness of equity</li> <li>II. The evolution of the fundament</li> <li>A. Roots of the fundamental rule</li> <li>1. The 1909 Grisbadarna arbitr</li> <li>2. The 1951 Anglo-Norwegian</li> <li>B. 1969: The beginnings 403</li> </ul>	y? 375 g values and principles 379 principles 381 ecial circumstances 381 382 385 idistance rule 386 risprudence and legal 392 tal norm of equity 394 394 ration 394	
<ul> <li>C. 1977: Reducing the rule 404</li> <li>D. 1982 and 1984: The victory of dis</li> <li>E. 1985: The turning of the tide</li> <li>F. 1999–2014: The two-step and th</li> <li>G. Conclusions 417</li> </ul>	accretionary determination 405 409	
<ul> <li>III. Legal foundations of the fundar.</li> <li>A. The Truman Proclamation and I</li> <li>B. The principle of peaceful settlem Charter) 422</li> <li>C. Justice, good faith, and equity in cases 423</li> <li>D. Judicial legislation 426</li> <li>E. Decision-making <i>ex aequo et bon</i></li> <li>F. Subsequent case law 435</li> </ul>	legal thinking 421 hent of disputes (Article 33 UN the North Sea Continental Shelf	

xii

- 1. Paramount foundation in equity 435
- 2. Foundation in the LOS Convention 437
- G. Towards a set of independent equitable principles 438

# 9 Conceptual issues and the context of equity 440

## I. The conceptual task 440

- A. The quest for equitable standards 440
- B. The process in case law 442
- C. Basic conceptual problems 451

# II. The impact of underlying concepts, objectives and ideas 453

- A. The relational nature of equity and equitable standards 453
- B. The object of delimitation: resources or marine space? 456
- C. The window of delimitation 459
- D. The issue of natural boundaries 462
  - 1. The impact of natural prolongation and plate tectonics 463
  - 2. The impact of ecology (ecosystems) 470
- E. A doctrine of the closest relationship 472
- F. The impact of underlying objectives and values 473

#### III. The legal environment of equity 475

- A. Pacta sunt servanda 476
  - 1. Delimitation and related agreements 476
  - 2. The principle of *uti possidetis* 479
  - 3. Compromis (special agreement) 482
- B. Historic rights 485
- C. Estoppel and acquiescence 489
- D. Third party interests 491
  - 1. Substantive claims and rights 491
  - 2. Procedural claims and rights: intervention or fair hearing ? 494
- IV. The political environment of equity and the need for transparency 510
- V. Conclusion: essential elements of an equitable solution 512

# 10 Justiciable standards of equity 515

I. The legal nature of equitable standards 515

# xiii

- A. The requirement of justiciability 515
- B. The legal nature of equitable principles and relevant circumstances 518
  - 1. Equitable principles 518
  - 2. The nature of relevant circumstances 522
  - 3. The element of 'equitable solution' 525

## II. Equitable standards related to physical geography 525

- A. Standards related to surface coastal configuration 525
  - 1. The coast dominates the sea (CDS) 526
  - 2. The principles of non-encroachment and non-cutting-off (NEP, NCP) 530
- B. Equitable principles related to space allocation 5381. Equal division of marine space (EDS) 538
- C. The principle of fair and reasonable proportionality (FRP) 541
  - 1. The relationship to the coastal lengths 542
  - 2. The problem of specification 543
  - 3. The field of application 556
  - 4. Assessment 557
- D. Relevant circumstances related to resource allocation 559
  - 1. The location of resources 560
  - 2. The possibility of eco-geographical criteria 563
  - Inherent limitations to resource allocation in general law of delimitation 564
  - Improving resource allocation by negotiation and by special agreement (compromis) 567

# III. Equitable standards related to conduct and human geography 568

- A. Standards related to conduct of coastal states 568
  - Relevant circumstance: historical conduct prior to the creation of the legal shelf and the EEZ 571
  - 2. The principle of recent and contemporary conduct (RCCP) 574
  - 3. Conclusions 577
- B. Social and economic standards 577
  - 1. General social and economic interests 578
  - Specifically related economic interests, in particular to the EEZ, and the principle of viability (VP) 583
  - 3. The circumstance of cultural and ethnological interests 589

xiv

11

C. D.	National security interests590Toward a principle of third generational rights593
	hoc concretization of equity by way of special agreement mpromis) 596
The n	nethodology of judicial boundary delimitation 602
I. Co A. B.	mpeting schools of jurisprudence602Introduction602Topical jurisprudence605
II. The A. B. C. D.	e programme of delimitation610Adjudication of legal issues outside the realm of equity611Defining the window of delimitation611Adjudication of rights and obligations stemming from treaty law, historical rights, estoppel and acquiescence or any other legal title613Adjudication of territorial jurisdiction614
III. Th A.	e proper methodology of equity 614 The beginnings in the courts: the idea of weighing and balancing
B.	factors 614 Toward a topical, problem-oriented methodology of equity 622
	1. Assessing the type of boundary required or permitted     623
	2. Assessment and adjudication of equitable principles 625
	<ol> <li>Specification and visualization of principles 625</li> <li>Vector analysis and co-ordination of boundary lines 626</li> </ol>
	<ol> <li>Vector analysis and co-ordination of boundary lines 626</li> <li>The corrective impact of relevant circumstances and of the requirement of an equitable result 628</li> </ol>
C.	The methodological impact of the goal of an equitable apportionment 630
D.	Role of technical methods and geometricalconstructions631
E.	<i>Iura novit curia</i> and the need for structural pairing of substance and procedure 631
F.	Conclusions 634

- IV. The problem and impact of islands 635
  - A. Introduction 635
  - B. Legal issues 638
    - 1. Basic entitlement to shelf and EEZ 638

- 2. Two categories of islands: constitutive and accessory entitlement 641
- C. Assessment and adjudication of equitable principles 642
  - 1. The impact of additive islands: ignoring locations 642
  - 2. Constitutive islands 644
  - Special circumstances and geometric fixation 3. 644

#### The role of equity in negotiations 645 12

#### I. Introduction 645

- II. The rule of equity and equitable principles in negotiated settlements 647
  - A. Mandatory or residual rules? 647
  - B. Law and policy in the negotiating process 653
  - C. Equity and the methodology of negotiations
    - 1. The role of equitable standards 654
    - 2. The proper methodology of delimitation in 655
    - negotiations 660
  - D. Conclusion

#### III. The equitable obligation to negotiate 660

- A. A new dimension of law 660
- The duty to negotiate maritime boundary B. delimitations 663
  - 1. The scope of obligation 663
  - 2. The impact of good faith and legitimate expectations 665

654

- 3. The prohibition of acts frustrating negotiations 666
- C. Foundations of the duty to negotiate 672
  - 1. Issues 672
  - 2. Specific foundations 672
  - 3. UN Charter? 674
  - 4. Customary law: prior consultation 675
  - 5. Equity 676
- D. Legal effects of violations of the duty to negotiate 679
  - 1. Compliance and possible reprisals 679
  - 2. The impact in court proceedings 681
  - The 1978 Aegean Continental Shelf case: an opportunity 3. missed 682
  - 4. Ordering negotiations 687

Appendix IMaritime boundary agreements1942–1992691Appendix IIGeneral maps721Bibliography747Index778

xvii