

Contents—Summary

<i>Acknowledgements</i>	v
<i>Preface</i>	vii
<i>List of Abbreviations</i>	xxxiii
<i>List of Contributors</i>	xxxix
<i>Table of Cases</i>	xlix
<i>Table of Treaties and Legislation</i>	lii

I. INTRODUCTION

1. The International Climate Change Legal and Institutional Framework: An Overview 3
David Freestone

II. GENERAL ISSUES

2. Legal Ownership and Nature of Kyoto Units and EU Allowances 35
Mathieu Wemaere, Charlotte Streck and Thiago Chagas
3. Accounting for Emissions: From Costless Activity to Market Operations 59
Allan Cook
4. Trade and Investment Implications of Carbon Trading for Sustainable Development 77
Marie-Claire Cordonier Segger and Markus Gehring
5. Linking of Emissions Trading Schemes 108
Michael Mehling
6. Private Actors in International and Domestic Emissions Trading Schemes 134
Jolene Lin

III. THE KYOTO PROTOCOL MECHANISMS

International Emissions Trading

7. International Emissions Trading and Green Investment Schemes 157
Sander Simonetti and Rutger de Witt Wijnen

Joint Implementation

8. A Mechanism with a Bright Future: Joint Implementation 176
Jelmer Hoogzaad and Charlotte Streck
9. Joint Implementation Transactions: An Overview 195
Anthony Hobley and Carly Roberts

The Clean Development Mechanism

10. The CDM Project Cycle and the Role of the UNFCCC Secretariat 213
Maria Netto and Kai-Uwe Barani Schmidt
11. Trying to Catch up with the Executive Board: Regulatory Decision-making and its Impact on CDM Performance 231
Matthias Krey and Heike Santen
12. Interpreting the Additionality of CDM Projects: Changes in Additionality Definitions and Regulatory Practices over Time 248
Axel Michaelowa
13. Responsibility for the Environmental Integrity of the CDM: Judicial Review of Executive Board Decisions 272
Christina Voigt

Contracts

14. Carbon Contracting 295
Martijn Wilder and Louisa Fitz-Gerald
15. The Secondary Market for Emissions Trading: Balancing Market Design and Market Based Transaction Norms 310
Andrew Hedges

IV. CARBON TRADING OUTSIDE KYOTO: REGIONAL SCHEMES

16. The European Union Emissions Trading Scheme 337
Markus Pohlmann
17. Emissions Trading before the European Court of Justice: Market Making in Luxembourg 367
Navraj Singh Ghaleigh

V. CARBON TRADING OUTSIDE KYOTO: NATIONAL AND SUB-NATIONAL SCHEMES

18. Emissions Trading in the US: Legal Issues 391
K Russell LaMotte, David M (Max) Williamson and Lauren A Hopkins
19. Offsets in the Emerging US Cap-and-Trade Programmes 423
Kyle W Danish

20. Carbon Markets and Policy in Australia: Recent Developments 444
Martijn Wilder and Louisa Fitz-Gerald
21. Canada’s Experience in Emissions Trading and Related Legal 469
 Issues
Gray E Taylor and Michael R Barrett
22. Carbon Law and Practice in China 488
Christopher Tung

VI. VOLUNTARY MARKETS

23. The Voluntary Carbon Market: Its Contributions and Potential 517
 Legal and Policy Issues
Michelle Passero

VII. POST KYOTO: MOVING TOWARDS COPENHAGEN

24. What Might a Future Global Climate Change Deal Look Like? 537
Murray Ward
25. The Role of Project-Based Mechanisms in the Future Carbon 548
 Market
Jos Cozijnsen and Michael J Coren
26. A Post-2012 Vision for the Clean Development Mechanism 562
Christiana Figueres and Charlotte Streck
27. International Market Solutions to Protect Tropical Rainforests 583
Robert O’Sullivan and Rick Saines
28. Aviation and Climate Change Regulation 606
Claybourne Fox Clarke and Thiago Chagas

VIII. SUMMARY AND OUTLOOK

- Summary and Outlook 625
Charlotte Streck and David Freestone
- Glossary* 635
- Index* 641

Contents

<i>Acknowledgements</i>	v
<i>Preface</i>	vii
<i>List of Abbreviations</i>	xxxiii
<i>List of Contributors</i>	xxxix
<i>Table of Cases</i>	xlix
<i>Table of Treaties and Legislation</i>	lii

I. INTRODUCTION

1. The International Climate Change Legal and Institutional Framework: An Overview	3
1. The Road to Rio and the UN Framework Convention on Climate Change	4
2. The Global Environment Facility	8
3. The Berlin Mandate	10
4. The Kyoto Protocol	11
5. The Kyoto Mechanisms	12
5.1 Article 6: Joint Implementation	13
5.2 Article 12: the Clean Development Mechanism	14
5.3 Article 17: Assigned Amount Trading	16
6. Implementation of the Kyoto Mechanisms	17
7. Carbon Contracting	22
8. Public Sector Financing for Climate Change	23
8.1 The new Climate Funds	25
8.1.1 The Special Climate Change Fund	26
8.1.2 Least Developed Countries Fund	26
8.1.3 Kyoto Protocol Adaptation Fund	26
8.2 Governance of the Climate Change Funds	27
8.2.1 LDCF and SCCF	27
8.2.2 The Adaptation Fund	28
8.3 The World Bank Climate Investment Funds	28
9. The Bali Roadmap	29
10. Conclusions	31

II. GENERAL ISSUES

2. Legal Ownership and Nature of Kyoto Units and EU Allowances	35
1. Introduction	35
2. Carbon Units	37
3. The Cornerstones of Emissions Trading	37
3.1 The ethical dimension	37
3.2 The basic concepts	40
3.2.1 Anthropogenic GHG emissions	40
3.2.2 Emissions trading systems	41
3.2.3 Allowances	42
3.2.4 Emission credits	43
4. Nature and Legal Ownership of Emission Rights	44
4.1 Public international law	45
4.1.1 The Kyoto Protocol	45
4.1.2 Treatment of Kyoto Units under the WTO	46
4.2 Domestic legal systems	48
4.2.1 The EU ETS	48
4.2.2 Under EU domestic schemes	50
4.2.3 Emissions trading experiences in the US	52
4.2.4 Emerging emissions trading schemes—Australia and New Zealand	55
5. Conclusions	57
3. Accounting for Emissions: From Costless Activity to Market Operations	59
1. Introduction	59
2. Background—an Aborted Interpretation	60
2.1 The problem	60
3. Controlling Emissions—Alternative Approaches	61
3.1 Baseline and credit	62
3.2 Cap and trade	62
3.3 The EU scheme under the Kyoto Protocol	62
4. The Accountants' Problem Rooted in Government Objectives	64
5. One Accounting Solution: Maintain the Status Quo	64
6. The Issues for the IFRIC	65
6.1 Allowances	66
6.2 Emissions liability	67
6.3 Grant of allowances	67
7. Effects of the IFRIC Decisions	68
8. Evaluation	70
9. Conclusion	73
Annex to Chapter 3	74

4. Trade and Investment Implications of Carbon Trading for Sustainable Development	77
1. Introduction	77
2. Trade Regimes, Investment Rules and Emissions Trading Schemes: Tools for Sustainable Development?	79
2.1 International trade law obligations	79
2.2 Regional trade and investment law obligations	83
3. Designing New GHG Regulatory Measures: Trade and Investment Considerations	85
3.1 Sustainable development objectives of the global climate regime	85
3.2 Trading for GHG emissions reductions	86
3.3 Trade and investment implications of carbon trading	87
3.3.1 Trade law implications of carbon trading measures	88
3.3.2 Investment law implications of carbon trading	92
4. Improving Trade and Investment Regimes for Sustainable Development	99
5. Technology Transfer Towards Low-Carbon Economies	102
6. Strengthening International Legal Coherence to Resist Climate Chaos	105
5. Linking of Emissions Trading Schemes	108
1. Introduction	108
2. Linking: A Conceptual Framework	112
2.1 Definition and concept	112
2.2 A typology of linkages	113
3. Identifying Legal and Normative Questions	114
4. Designing a Market Link: Legal Nature and Process	119
4.1 Unilateral linking	119
4.2 Bilateral and multilateral linking	119
4.3 Reciprocal unilateral linking	121
4.4 The linking process: institutional considerations	122
4.5 The linking process: normative considerations	124
5. Implementing a Market Link: Compliance with the Regulatory Framework	125
5.1 Compliance with international law	126
5.2 Compliance with regional and national law	128
5.2.1 Case study: United States	129
5.2.2 Case study: European Union	131
6. Conclusions	132

6. Private Actors in International and Domestic Emissions Trading Schemes	134
1. Introduction	134
2. Emissions Trading and the Carbon Market	136
2.1 What is a carbon transaction?	136
2.2 Defining the carbon market	137
3. Risks and Opportunities in the Global Project-Based Carbon Regime	138
3.1 Legal risks	139
3.1.1 The right to review Executive Board decisions	139
3.1.2 Legal challenges by local stakeholders	141
3.1.3 The legal nature of a CER	142
3.2 Regulatory risks	144
3.2.1 Delay	144
3.2.2 Host country risk	145
3.2.3 Risks faced by Designated Operational Entities (DOEs)	146
4. Risks and Opportunities in the EU Emission Trading System	148
4.1 Regulatory risks	149
4.1.1 Regulatory burdens	149
4.1.2 Risks faced by verifiers	149
4.1.3 Expansion in scope	149
4.2 Legal risks	150
4.2.1 The right to review decisions	150
4.2.2 Legal nature of an EUA	150
4.3 Infrastructure risk	150
4.4 Market risks: allocation	151
5. The EU ETS Phase III	152
5.1 The '20 in 2020' target	152
5.2 Auctioning and allocation free of charge	152
5.3 Expanded scope	153
5.4 Use of CERs and ERUs	154
6. Conclusion	154

III. THE KYOTO PROTOCOL MECHANISMS

International Emissions Trading

7. International Emissions Trading and Green Investment Schemes	157
1. Introduction	157
2. International Emissions Trading	157
2.1 Emission rights	157
2.1.1 Right to emit	158
2.1.2 Specified substance	158

2.1.3	Certain quantity	158
2.1.4	Defined period of time	159
2.2	The Kyoto trading systems	159
2.3	International Emissions Trading under Article 17	159
2.3.1	Eligibility requirements	160
2.3.2	Legal entities	161
2.3.3	Transfer procedures	162
2.3.4	Commitment Period Reserve	162
2.3.5	International Transaction Log	163
3.	Green Investment Schemes	164
3.1	Background	164
3.2	Nature of the GIS Agreement	165
3.2.1	Treaty or commercial contract	166
3.2.2	Applicable law and dispute resolution	166
3.3	Greening issues	167
3.3.1	Types of greening	168
3.3.2	Additionality	168
3.3.3	Greening ratio	168
3.3.4	Project selection and fund allocation	169
3.3.5	Monitoring and verification	170
3.3.6	Timeframe	170
3.3.7	State aid and competition	171
3.4	Other contractual issues	172
3.4.1	Risks	172
3.4.2	Settlement scenarios	173
4.	Summary	175

Joint Implementation

8.	A Mechanism with a Bright Future: Joint Implementation	176
1.	Introduction	176
2.	Background	177
3.	Pioneering Track 1 JI	180
4.	JI and the CDM	183
5.	JI—The Promise of Oblivion	185
5.1	Effectiveness and efficiency	187
5.2	Pioneering new areas	188
5.3	Encouraging programmatic JI	189
5.4	Encouraging sectoral JI	189
5.5	Strengthen governance and legal framework	190
5.6	Reduce host country uncertainty	190
6.	Post-2012 Framework	190
7.	Conclusions	193

9. Joint Implementation Transactions: An Overview	195
1. Introduction	195
2. Joint Implementation in Practice	196
2.1 JI Host Countries	196
2.2 Current JI pipeline	197
3. JI and CDM	198
4. JI Transaction Risk Assessment	199
4.1 Delivery risk	200
4.2 Host Country and political risk	200
4.3 Involvement of different authorities	202
4.4 Missing regulation	203
4.5 Slow start/early finish	203
5. Drafting Contracts for Sale and Purchase of JI Emission Reductions	204
5.1 Use of templates	205
5.2 Drafting for regulatory risks	206
5.3 Change of law, law governing the contract, and dispute resolution	206
5.4 Drafting for JI project cycle	207
5.5 Focal point role in JI	207
5.6 Track 1 and Track 2	208
5.7 Secondary JI contracting	208
6. How to Approach JI Project Due Diligence	209
7. Conclusion	210

The Clean Development Mechanism

10. The CDM Project Cycle and the Role of the UNFCCC Secretariat	213
1. Introduction	213
2. CDM Actors	214
2.1 COP/MOP	215
2.2 Executive Board	215
2.3 Panels	216
2.4 Designated Operational Entities	218
2.5 Project participants	218
2.6 Designated National Authorities	219
2.7 The public	219
2.8 Secretariat	220
3. CDM Project Cycle	221
3.1 Introduction to the cycle	221
3.2 Accreditation of Operational Entities	222
3.3 Approval of new methodologies	223

4. CDM Project Cycle Steps	224
4.1 Design of a CDM project activity	225
4.2 Validation/registration	225
4.3 Monitoring	227
4.4 Verification/certification of the CDM project activity	227
4.5 Issuance	228
5. Conclusions	229
11. Trying to Catch up with the Executive Board: Regulatory Decision-Making and its impact on CDM Performance	231
1. 2008—Clean Development Mechanism in Crisis?	231
2. Understanding CDM Rule-making and its Implications	232
3. Uncertainties at Early Stage	234
4. Uncertainties after Submission for Validation	239
5. Advanced Stage/Post Registration	242
6. Proposals for CDM Reform and Related COP/MOP Decisions	246
7. Conclusions	247
12. Interpreting the Additionality of CDM Projects: Changes in Additionality Definitions and Regulatory Practices over Time	248
1. The CDM as an Offset Mechanism, its Stakeholders, and the Challenge of Additionality	248
2. The Initial Interpretation of Additionality	250
3. The EB Cuts the Gordian Knot	251
4. Benchmarks and Free Rider Default Additionality Parameters	255
5. Case Law—Lessons From Review and Rejection of Projects	256
5.1 Problems with the investment test	257
5.2 Challenges in specifying benchmarks	259
5.3 Problems with the barrier test	260
5.4 Lack of ‘serious consideration’	261
5.5 Problems with the common practice test	263
5.6 The Validation and Verification Manual	263
6. Current Proposals for Additionality Reform	263
6.1 Incremental reform of the additionality tool—the WWF proposal	264
6.2 Benchmarking	265
7. Do Away with Additionality in The Long Term?	269
8. Additionality—Can the EB Stem the Tide of Non-additional Projects?	270

13. Responsibility for the Environmental Integrity of the CDM: Judicial Review of Executive Board Decisions	272
1. Introduction	272
2. The Importance of the CDM	273
3. Environmental Integrity	273
3.1 The significance of environmental integrity	273
3.2 Definition of environmental integrity	275
3.3 The problem of environmental ‘disintegrity’	278
4. Responsibility of the Executive Board for Environmental Integrity	279
5. Possibilities for Judicial Review of Executive Board Decisions	281
5.1 Why review Executive Board decisions?	282
5.2 Scope of review	284
5.3 The forum for review	286
5.3.1 External review	286
5.3.2 Internal review	287
5.3.3 Review in national courts	290
6. Conclusions	293

Contracts

14. Carbon Contracting	295
1. Introduction	295
2. History of Approaches to Carbon Contracting	296
2.1 The Pre-Kyoto period	296
2.2 The entry into force of the Kyoto Protocol	297
2.3 Post-Kyoto—more sophisticated transactions	299
3. Key Issues in Carbon Contracting	301
4. Contracting Approaches	301
5. Interplay Between International and Domestic Laws: Impacts on Contracting	304
6. Managing Risk through Carbon Contracts	306
7. Recent Contracting Issues	307
7.1 The impact of the new Modalities of Communication	307
7.2 Voluntary credits and the concern for quality	308
8. Conclusion	308
15. The Secondary Market for Emissions Trading: Balancing Market Design and Market Based Transaction Norms	310
1. Introduction	310

2. Design Elements for the Creation of a Successful Secondary Market	311
2.1 Comprehensive in Scope	311
2.1.1 The Inclusion of New Sectors	312
2.1.2 The Inclusion of New Gases	312
2.2 Capable of creating scarcity	313
2.2.1 Structure of Phase III cap	313
2.2.2 Banking	314
2.2.3 Auctioning	314
2.3 Predictable in application	314
2.3.1 Mitigation of excessive prices	315
2.3.2 Proposals to adjust the functioning of the carbon market	315
2.3.3 Power sector	316
2.3.4 Industrial sectors	316
2.3.5 Industrial sectors exposed to leakage	316
2.4 Robust regulation and enforcement	318
2.5 Technically capable	321
3. Market-driven Components of Secondary Market Trading	322
3.1 Understanding the market for emissions trading in Europe	324
3.1.1 Spot transactions	324
3.1.2 Forward transactions	325
3.1.3 OTC Market	325
3.1.4 Exchange market	325
3.2 OTC Market	326
3.3 Exchange Trading	328
3.3.1 Direct trading	329
3.3.2 Order-route trading	329
3.4 Impact of future developments	330
4. Transaction Evolution Through Primary and Secondary Market Interaction	331
4.1 Relevant market conditions	332
4.2 Emergence of innovative transactions	332

IV. CARBON TRADING OUTSIDE KYOTO: REGIONAL SCHEMES

16. The European Union Emissions Trading Scheme	337
1. Introduction	337
1.1 Overview	337
1.2 Background and legislative history	340
2. Cornerstones of the EU ETS	343
2.1 Centralization v Decentralization	343
2.2 Coverage	344

2.2.1	Status quo	344
2.2.2	Aviation and other sectors and GHG	345
2.3	Permits and EUAs	348
2.3.1	Permits	348
2.3.2	EUAs	349
2.3.3	Banking and borrowing	349
2.3.4	Legal nature of EUAs	350
2.4	Cap-setting and national allocation plans	353
2.4.1	Status quo	353
2.4.2	EU ETS Amendment	354
2.5	Method of allocation (grandfathering v auctioning)	356
2.5.1	Status quo	356
2.5.2	EU ETS Amendment	357
2.6	Compliance and enforcement	358
2.7	EUA transfers and registries	359
3.	Linkages of EU ETS to Kyoto Protocol and Other Emissions Trading Schemes	359
3.1	EU ETS and Kyoto Protocol	359
3.1.1	EUAs and AAUs	360
3.1.2	ITL and CITL	360
3.1.3	The Linking Directive	361
3.1.4	Double counting	363
3.2	EU ETS and other emissions trading schemes	364
4.	Lessons Learned	365
5.	Conclusions	366
17.	Emissions Trading before the European Court of Justice: Market Making in Luxembourg	367
1.	Introduction	367
2.	Prehistory of the EU ETS	369
3.	Legal Form	371
4.	The Community Courts' Case Law	374
4.1	Article 234—preliminary references challenging the validity of the Directive	375
4.2	Article 230 challenges to Commission Decisions on the National Allocation Plans	377
4.2.1	Phase I Challenges	378
4.2.2	Phase II Challenges	382
4.3	Miscellaneous cases	385
5.	Conclusions	385

V. CARBON TRADING OUTSIDE KYOTO: NATIONAL AND SUB-NATIONAL SCHEMES

18. Emissions Trading in the US: Legal Issues	391
1. Introduction	391
2. Sub-National Greenhouse Gas Trading Initiatives	392
2.1 The Northeast Regional Greenhouse Gas Initiative	392
2.2 California Assembly Bill 32	394
2.3 The Western Climate Initiative	394
2.4 The Midwestern Greenhouse Gas Reduction Accord	395
2.5 The Chicago Climate Exchange	396
3. Legal Issues in US Carbon Trading	396
3.1 Property rights	397
3.2 Contracting and transactions	399
3.3 Taxation	400
3.4 Inter-system linkage	402
3.4.1 Linkages between sub-national regimes	403
3.4.2 Linkages between sub-national and international regimes	403
3.4.3 Linkages between US federal and sub-national regimes	405
3.4.4 Linkages between US federal and international regimes	405
4. Potential Challenges to Sub-National Regulation	406
4.1 Pre-emption	406
4.2 Foreign affairs pre-emption	408
4.3 Compact Clause	410
4.4 Commerce Clause	411
5. Prospects for Federal Cap-and-trade Legislation	413
5.1 International trade and competitiveness	414
5.2 Potential Clean Air Act regulation	414
5.3 Interaction with NEPA	416
5.3.1 CAFE standards	418
5.3.2 Columbia River Crossing Project	419
5.3.3 Imperial-Mexicali Transmission Lines	419
5.3.4 Orlando Gasification Project	419
5.3.5 Strategic Petroleum Reserve Expansion Project	420
5.4 Carbon Reporting	420
6. Conclusions	421
19. Offsets in the Emerging US Cap-and-Trade Programmes	423
1. Introduction to Offsets	423
1.1 The role of offsets in a cap-and-trade programme	423
1.2 History of offsets programmes	425
1.3 Scope of offset projects	426

2. Additionality and Standards-Based Approaches	426
3. Annual Quantity Limits on Offsets	427
4. Addressing the Risk of Reversals in Projects Involving Sequestration	429
5. Crediting Early Action	432
6. International Offsets	434
7. Activities that Reduce Emissions from Deforestation and Degradation	436
8. Offsets in State and Regional Programmes	438
8.1 The Regional Greenhouse Gas Initiative (RGGI)	439
8.2 CARB Scoping Plan and WCI Design Recommendations	440
9. Conclusion	443
20. Carbon Markets and Policy in Australia: Recent Developments	444
1. Introduction	444
2. A National Emissions Trading Scheme for Australia	445
3. Mandatory Reporting	447
4. Other Government Policies	448
5. Mandatory Renewable Energy Target	449
6. The Voluntary Carbon Market	451
6.1 An Australian Offset Standard	451
6.2 Australian Competition and Consumer Commission investigation into 'green' claims	452
7. Conclusion	453
Annex to Chapter 20	454
21. Canada's Experience in Emissions Trading and Related Legal Issues	469
1. Introduction	469
2. The Canadian National Government's Proposed GHG Emissions Reduction Plan	471
2.1 National Plan Regulatory Approach	471
2.1.1 No required reductions in uncontrollable 'fixed process' GHG emissions	473
2.1.2 Deferral of cleaner fuel standard targets	473
2.1.3 Encouragement of new co-generation facilities	474
2.2 National Plan Compliance Options	475
3. Significant Proposed and Implemented Provincial GHG Plans	477
3.1 Alberta	477

3.2 Ontario	479
3.3 British Columbia	479
4. Specific Issues Related to Canadian GHG Regulation	480
4.1 Constitutional authority to regulate GHGs	480
4.2 Carbon capture and storage	483
4.2.1 Property rights	483
4.2.2 Monitoring and verification	484
4.2.3 Liability	484
4.3 International trade issues raised by GHG regulation	484
5. Canada's GHG Regulatory Future	487
22. Carbon Law and Practice in China	488
1. Introduction	488
2. Climate Change, Sustainable Development Policy, and the Implementation of the UNFCCC and the Kyoto Protocol	488
2.1 Agenda 21, China's sustainable development policy and law	489
2.2 Content of China's A21	490
2.3 Chinese policies on sustainable development	491
2.3.1 Five-year plans	491
2.3.2 Major policy shifts	492
2.4 National targets	492
3. Chinese Laws Supporting Climate Change Action	493
3.1 White Paper	494
3.2 Chinese laws relevant to action on climate change	494
3.2.1 PRC Law on the Prevention and Control of Atmospheric Pollution	494
3.2.2 PRC Cleaner Production Promotion Law	494
3.2.3 PRC Environmental Impact Assessment Law	494
3.2.4 PRC Law on Desert Prevention and Transformation	495
3.2.5 PRC Flood Control Law	495
3.2.6 PRC Water Law	495
3.2.7 PRC Forest Law	495
3.2.8 PRC Environmental Protection Law	495
3.2.9 The Measures on Administration and Operation of Clean Development Mechanism Projects	496
3.2.10 Energy Conservation Law	496
3.2.11 Renewable Energy Law	496
3.2.12 Circular Economy Promotion Law	496
3.3 Draft Energy Law	496
4. The Effectiveness of China's Implementation of the UNFCCC and the CDM	497
4.1 Policies and laws regulating CDM projects in China	497
4.2 China's CDM Policy	498

4.2.1	Floor price for CERs	498
4.2.2	No sale of CERs post-2012	499
4.2.3	CER income	499
4.2.4	The Chinese Control Rule	499
4.2.5	CDM levy	500
4.2.6	Enterprise income tax relief	500
5.	The Emerging Role of Hong Kong	501
5.1	Climate change and sustainable development policy in Hong Kong	501
5.2	Implementation of CDM in Hong Kong	501
5.3	Hong Kong investors in Chinese CDM Projects	502
6.	The Practical Effect of China's Climate Change Policy at National, Provincial, and Local Levels	503
7.	Carbon Law and Practice Fundamentals with Chinese Characteristics	504
7.1	Back to first principles	504
7.2	A pure legal fiction and creation of policy	504
7.3	The carbon asset: not a commodity and not all equal	504
7.4	The legal nature of CERs in China	505
8.	Selected Issues in Carbon Procurement and Contracting	506
8.1	Civil law v common law	506
8.2	Types of contract	507
8.3	The right of the seller to sell CERs	507
8.4	The 'control' rule	508
8.5	Delivery	508
8.6	Payment	508
8.7	Communications with the CDM Executive Board and focal point	509
8.8	Dispute avoidance and resolution	509
9.	A Consideration of Options Post 2012: Evolution or Revolution, a Continuation of the CDM or a New Mechanism?	510
9.1	Introduction	510
9.2	China's intentions with respect to the CDM	510
9.3	Intensity targets	511
9.4	Sectoral targets	511
9.5	Revolution?	512
10.	The Potential for the Emergence of a Carbon Emissions Trading Scheme in China	512
11.	China's Specific Responses to Carbon Risk and a Low Carbon Economy	513
11.1	Low carbon development zones	514
12.	Conclusions	514

VI. VOLUNTARY MARKETS

23. The Voluntary Carbon Market: Its Contributions and Potential Legal and Policy Issues	517
1. Introduction	517
2. Background	517
3. Contributions by the Voluntary Market	520
4. Additional Actions to Support the Voluntary Market	523
4.1 Harmonization of GHG accounting standards	523
4.2 Determining the legal nature of VERs	527
5. Summary and Conclusions	532

VII. POST KYOTO: MOVING TOWARDS COPENHAGEN

24. What Might A Future Global Climate Change Deal Look Like?	537
1. Introduction	537
2. The Scale of the Task	538
3. Meeting the Needs	539
4. Key Elements of a Global Agreement	540
5. A Sectoral Perspective	544
6. Negotiation Process Issues	546
7. Legal Issues—Beginning Reflections and Questions	546
8. Concluding Thoughts	547
25. The Role of Project-Based Mechanisms in the Future Carbon Market	548
1. Introduction	548
1.1 Where we are: emission reductions and carbon markets	549
1.2 Emerging national emission markets	551
2. Project-Mechanisms as a Transitional Tool	555
2.1 Linkages among markets	556
2.2 Investment mechanism for developing countries	557
2.2.1 Reformed CDM	558
2.2.2 Crediting for NAMAs	558
2.2.3 Reduced Emissions from Deforestation and Degradation (REDD)	559
3. Getting There From Here: Mechanisms and Structure For a Future Global Market	560

26. A Post-2012 Vision for the Clean Development Mechanism	562
1. Introduction	562
2. The Clean Development Mechanism: the Expectations of Success	563
2.1 Shortcomings	564
2.1.1 Inefficient operation	564
2.1.2 Insufficient contribution to sustainable development	565
2.1.3 Weakness of the incentive	566
2.1.4 Weak governance	567
3. Political Realities	567
4. Scaling up Emission Reductions in Developing Countries	570
4.1 Environmental integrity	570
4.2 Uncertainty over demand	570
4.3 Market and non-market	571
4.4 Three possible levels of improvement	571
4.4.1 The activity-based CDM	571
4.4.2 A trend-changing market mechanism	572
4.4.3 A non-market mechanism	572
5. The Activity-Based Clean Development Mechanism	572
5.1 Improvements that can be enacted by the Executive Board itself	573
5.1.1 Increased delegation to the Secretariat	573
5.1.2 Review of the EB's administrative rules	573
5.1.3 Role of Designated Operational Entities	574
5.2 Improvements requiring a COP/MOP decision	574
5.2.1 Professionalizing the EB	574
5.2.2 Review mechanism	575
6. A Trend-changing Market Mechanism	575
6.1 Industry agreements	576
6.2 Government actions	577
6.2.1 At the mitigation level	579
6.2.2 At the financing level	579
6.2.3 At the crediting level	580
6.2.4 At the administrative level	580
7. A Non-market Mechanism	581
8. Conclusion	582
27. International Market Solutions to Protect Tropical Rainforests	583
1. Introduction	583
2. Consideration Under the UNFCCC	586
3. Analysis and Evolution of Issues	588
3.1 Scope	588
3.2 Scale	590

3.3 Permanence	591
3.4 Market and non-market funding	593
4. Cross-cutting issues to trading REDD	594
4.1 Governance	595
4.2 Defining the REDD credit	598
4.3 Market risks	600
4.3.1 Flooding	601
4.3.2 Use restrictions	601
4.3.3 Other market risks	602
4.4 Transactions	602
5. Conclusions	605
28. Aviation and Climate Change Regulation	606
1. Introduction	606
2. Current Efforts at International Regulation	607
2.1 Aviation under the UNFCCC and the Kyoto Protocol	607
2.2 Developments under ICAO	608
2.3 The EU approach	610
3. International Response to the EU Approach and the Ongoing Debate over the Development of Measures through ICAO	612
4. Post-2012 Measures to Reduce Emissions	615
4.1 The appropriate post-2012 authority	616
4.2 Potential post-2012 options	617
4.2.1 Inclusion under national totals	617
4.2.2 A sectoral approach	617
4.3 Regional authorities	619
5. Conclusions	620
VIII. SUMMARY AND OUTLOOK	
Summary and Outlook	625
1. Originality and Innovation	625
2. Learning by Doing	628
3. Uncertainty	630
<i>Glossary</i>	635
<i>Index</i>	641

