

Contents

<i>List of Figures</i>	xvii
<i>List of Tables</i>	xviii
<i>List of Cases</i>	xix
<i>Preface and Acknowledgements</i>	xxxiii

1 The Foundations of EU Environmental Law: History, Aims and Context	1
History and Development of the European Union's Environmental Policy	1
Aims of EU Environmental Policy	8
<i>A 'High Level of Environmental Protection Taking into Account the Diversity of Situations in the Various Regions of the Union'</i>	9
<i>Sustainable Development</i>	12
Legal Bases and Environmental Guarantee Provisions	16
<i>General Legal Bases</i>	17
<i>Environmental Guarantee Provisions and Minimum Harmonisation</i>	18
The Nature of the European Union's Environmental Competences	22
Understanding EU Environmental Law and Policy in Context	25
<i>Environment, Risk and Science</i>	26
<i>Risk and Risk Regulation</i>	26
<i>Risk Regulation in the European Union</i>	27
<i>Risk Regulation and Critique</i>	29
<i>Science and Expertise in EU Law and Policy</i>	31
<i>Science, Precaution and Discretion</i>	33
<i>Environment and Governance</i>	36
<i>From Pollution Control to Strategic Environmental Governance</i>	37
<i>Multi-level and Transnational Governance</i>	39
<i>Flexible and Decentred Governance</i>	40
<i>Good Governance</i>	41
<i>Environment, Philosophy and Ethics</i>	43
<i>Environment and Geography: The Challenges of Enlargement</i>	47
2 Actors and Instruments	54
Actors	54
<i>The European Commission</i>	54
<i>The Council of the EU</i>	60
<i>The European Parliament</i>	62
<i>The European Council</i>	65

<i>The Court of Justice of the European Union (CJEU) and the General Court</i>	67
Other Bodies and Actors	68
<i>The Economic and Social Committee</i>	68
<i>The Committee of the Regions (CoR)</i>	69
<i>The European Environment Agency</i>	70
<i>The European Investment Bank (EIB)</i>	72
<i>The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL)</i>	73
<i>Interest Groups</i>	74
<i>Public Interest Groups</i>	74
<i>Business Interest Groups</i>	76
Instruments	76
<i>Regulations</i>	77
<i>Directives</i>	78
<i>Decisions</i>	80
<i>Environmental Action Programmes</i>	82
<i>Recommendations and other Soft Law Instruments</i>	83
<i>Financial Instruments</i>	84
<i>LIFE (the Financial Instrument for the Environment Regulation)</i>	84
<i>EU Structural and Investment Funds</i>	86
3 Principles in EU Environmental Law	90
<i>Introduction</i>	90
<i>Legal Status and Effect of (Environmental) Principles in EU Law</i>	92
<i>The Precautionary Principle</i>	94
<i>The Preventive Principle</i>	99
<i>The Rectification at Source Principle</i>	100
<i>The Polluter Pays Principle</i>	100
<i>The Environmental Integration Principle</i>	103
<i>Focus on the Integration of EU Economic and Environmental Law and Policy</i>	105
<i>Overview</i>	105
<i>Environmental Considerations and the Treaty Internal Market Provisions</i>	109
<i>Environmental Considerations and Article 110 TFEU</i>	109
<i>Environmental Considerations and Articles 34–36 TFEU</i>	110
<i>Article 34 TFEU and National Measures Promoting Green Energy</i>	112
<i>Green Public Procurement</i>	116
4 Techniques of Regulating the Environment	120
<i>Introduction: The EU's Changing Regulatory Toolbox</i>	120
<i>Understanding Regulatory Choices: Factors and Philosophies</i>	
<i>Underlying EU Decisions as to Environmental Regulatory Technique</i>	123

<i>Environmental Effectiveness</i>	123
<i>Economic Efficiency</i>	124
<i>Political and Administrative Feasibility</i>	125
<i>Flexibility</i>	126
<i>Compatibility with Existing EU and National Institutional Frameworks</i>	126
<i>Compatibility with Beliefs and 'Ideas'</i>	127
<i>Surveying the EU's Environmental Regulatory Techniques</i>	129
<i>Hierarchy: Direct or 'Command and Control' Techniques</i>	129
<i>Overview</i>	129
<i>Flexible Direct Regulation: Framework Directives</i>	132
<i>Proceduralised Direct Regulation</i>	133
<i>The Pros and Cons of Direct Environmental Regulation in the EU</i>	133
<i>Market-Based Instruments</i>	135
<i>Overview</i>	135
<i>Tradable Permit Schemes</i>	139
<i>Other Examples of the EU's Embrace of Market-Based Instruments</i>	142
<i>Network-Based Approaches: Voluntary Techniques and Corporate</i>	
<i>Social Responsibility</i>	143
<i>Overview</i>	143
<i>Enabling Corporations</i>	145
<i>Enabling Consumers and Civil Society</i>	148
5 Environmental Rights in Europe	150
<i>Introduction: Why Environmental (Human) Rights?</i>	150
<i>Rights Originating from the Council of Europe</i>	153
<i>The 1950 European Convention for the Protection of Human Rights and Fundamental Freedoms (the 'ECHR')</i>	153
<i>No Right to a Decent Environment</i>	153
<i>Article 8 ECHR: Right to Respect for Private and Family Life</i>	154
<i>Article 6(1) ECHR: Right to a Fair Trial</i>	161
<i>Article 1 of Protocol No. 1: The Right to Property</i>	162
<i>The 1961 European Social Charter (the 'ESC')</i>	163
<i>The Charter of Fundamental Rights of the EU (the 'Charter')</i>	165
<i>The Aarhus Convention on Access to Information, Public</i>	
<i>Participation in Decision-Making and Access to Justice in Environmental Matters</i>	168
<i>The Aarhus Convention's Approach to Environmental Rights</i>	169
<i>Signatories, Ratification and Compliance</i>	170
<i>Aarhus's Three Substantive Pillars</i>	171
<i>Access to Information</i>	172
<i>Public Participation</i>	173
<i>Access to Justice</i>	176
<i>Implementation of the Aarhus Convention in EU Law</i>	179
<i>Other Relevant Sources of International Human Rights Law</i>	182

6 Public Enforcement of EU Environmental Law	184
Introduction: The Enforcement Deficit in EU Environmental Law	184
Public Enforcement of EU Environmental Law: Enforcement	
by the European Commission	186
<i>Article 258 TFEU</i>	186
<i>Overview</i>	187
<i>The Administrative Phase</i>	188
<i>The Litigation Phase</i>	192
‘General and Persistent’ Breaches of EU Law	192
<i>Defences</i>	193
<i>Interim Measures</i>	194
<i>Article 260 TFEU</i>	195
<i>Broader Commission Initiatives to Improve Enforcement of EU Environmental Law</i>	199
Public Enforcement of EU Environmental Law: Enforcement	
by National Authorities	200
<i>Principles</i>	200
<i>The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) Network</i>	203
<i>The Environmental Liability Directive</i>	204
<i>Overview</i>	204
<i>Scope of Application</i>	205
<i>Causation</i>	207
<i>Duties Imposed on Operators</i>	209
<i>Powers and Duties of Competent Authorities</i>	211
<i>Observations and Requests for Action</i>	212
<i>Transboundary Damage</i>	212
<i>Criminal Penalties</i>	213
7 Private Enforcement of EU Environmental Law	217
Private Enforcement of EU Environmental Law at National Level	217
<i>Direct Effect of EU Environmental Law</i>	217
<i>Overview</i>	217
<i>Must a Directly Effective Provision Confer a Right on an Individual?</i>	219
<i>Which Bodies Must Apply Directly Effective Provisions?</i>	222
<i>Other Means of Relying on EU Law before National Courts</i>	230
<i>The Duty of Consistent Interpretation (‘Indirect Effect’)</i>	230
<i>‘Triangular’ Cases</i>	233
<i>‘Incidental’ Horizontal Direct Effect</i>	234
<i>Horizontal Direct Effect of a ‘General Principle’ of EU Law</i>	235
<i>State Liability in Damages for Breach of EU Law</i>	236
<i>EU Legislation on Access to Justice at National Level and the Role of the Aarhus Convention</i>	
<i>The Provisions of the Aarhus Convention on Access to Justice</i>	237
	238

<i>Implementation of Article 9 of the Aarhus Convention in EU Law</i>	240
Private Enforcement of EU Law at EU Level	246
<i>Access to Justice before the EU Courts</i>	246
<i>Access to Justice by Means of Internal Review under Regulation 1367/2006</i>	251
<i>Other Means of Accessing Justice at EU Level</i>	254
8 Climate Change	257
Introduction	257
Mandate of the European Union with Regard to Climate Change	258
High Stakes: The Challenge of Climate Change Leadership	260
<i>The External Dimension of Climate Change Leadership</i>	262
<i>The Internal Dimension of Climate Change Leadership</i>	266
<i>The Challenge of Leadership Exemplified: The Case of Aviation</i>	269
The Scope of the Climate Change Challenge	273
Climate Change as a Multi-Level Governance Challenge: The Example of Renewable Energy	275
<i>Renewable Energy Policy in the EU: Reconciling European Ambition with National Differentiation through Multi-Level Governance</i>	275
<i>The 2009 Renewable Energy Directive (RED)</i>	278
<i>National Action Plans</i>	280
<i>Cooperation between Member States</i>	281
<i>Access to the Grid and Guarantees of Origin</i>	282
<i>The Difficult Question of Biofuels</i>	283
<i>National Support Schemes</i>	286
<i>Free Movement of Renewable Energy: Navigating between the Goals of Trade Liberalisation, Environmental Protection and National Control over Energy Policy</i>	287
The Challenge of a Regulation-Based Market	289
<i>The ETS as Market-Based Regulation</i>	290
<i>Gauging the Effectiveness of Market-Based Regulation</i>	292
<i>Managing a Regulation-Based Market</i>	293
<i>The Allocation of Allowances</i>	293
<i>Recession and Transnational Offsetting</i>	294
<i>Addressing the Burden of the Past: Backloading and the Market Stability Reserve</i>	296
Concluding Remarks	296
9 Air Pollution and Industrial Emissions	298
Introduction: Key Themes of EU Air Pollution and Industrial Emissions Law	299
Ozone-Depleting Substances	301

Ambient Air Quality	306
<i>Approaches to Standardisation</i>	309
<i>The EU Legal Framework</i>	312
<i>The 2001 NECD</i>	312
<i>The 2008 AQFD</i>	313
<i>Member State Implementation of EU Ambient Air Legislation</i>	315
Regulating Industrial Emissions	321
<i>Integrated Pollution Prevention and Control within the IED</i>	323
<i>'Best Available Techniques' (BAT)</i>	325
<i>Standardisation in the IPPC Framework: The Anchoring Function of BAT</i>	328
<i>The Evolution of BREFs: A Hardening Attitude towards EU Soft Law</i>	330
<i>Flexibility in the IED: An Assessment</i>	333
Coherence in Air Pollution Law	335
Conclusion	336
 10 EU Water Law	338
Introduction	338
<i>Europe's Waters Interconnected</i>	338
<i>The History of EU Water Law</i>	339
<i>The Inter-Related Threads of EU and International Water Law</i>	340
The 2000 Water Framework Directive	341
<i>History of the Water Framework Directive (WFD)</i>	341
<i>Overview</i>	342
<i>River Basin Management and the 'Programme of Measures'</i>	343
<i>The 'Environmental Objectives'</i>	344
<i>Surface Water</i>	345
<i>Groundwater</i>	348
<i>The Water Framework Directive's Derogations from the Environmental Objectives</i>	352
<i>Combined Approach</i>	353
<i>Priority Substances</i>	354
<i>Economic Analysis</i>	355
<i>Public Involvement</i>	357
<i>Governance</i>	357
<i>Assessment</i>	360
Drinking Water	360
<i>History and Overview</i>	360
<i>Ensuring that Drinking Water is 'Wholesome and Clean'</i>	361
<i>Providing for Hard Cases: Lead and Pesticides</i>	362
<i>Monitoring and Compliance</i>	363
<i>Assessment</i>	364
Bathing Water	365
<i>Defining Bathing Waters</i>	365

<i>From Emissions Limit Values to Classification</i>	366
<i>Monitoring and Assessment</i>	367
<i>Public Participation</i>	367
<i>Assessment</i>	368
Regulation of Dangerous Substances	368
<i>Dangerous Substances in Water Directives</i>	368
<i>Priority Substances Directive</i>	369
<i>Directive 2008/105/EC</i>	369
<i>Listing Substances and Review of Adopted List of Priority Substances</i>	369
<i>Assessment</i>	370
Nitrates	371
<i>Regulating Non-Point Source Pollution</i>	371
<i>'Nitrogen Zones'</i>	371
<i>Improving Environmental Quality</i>	372
<i>Additional Measures and Derogations</i>	372
<i>Assessment</i>	373
Urban and Industrial Waste Water	373
<i>Collection, Treatment and Disposal</i>	374
<i>Sensitive Areas</i>	374
<i>Identifying Eutrophication</i>	375
<i>Less-Sensitive Areas</i>	376
<i>Industrial Waste Water</i>	377
<i>Institutional Framework</i>	377
11 Impact Assessment	379
<i>History and International Context</i>	379
The 1991 UNECE Espoo Convention on Transboundary Environmental Impact Assessment	382
<i>Overview</i>	382
<i>Obligations</i>	383
The EIA Directive	385
<i>Scope and Purpose</i>	386
<i>What is an EIA?</i>	387
<i>The 'Competent Authority'</i>	389
<i>Projects Subject to EIA</i>	390
<i>Annex I Projects: Mandatory EIA</i>	390
<i>Annex II Projects: The Screening Process</i>	391
<i>Exemptions from the EIA Requirement</i>	393
The EIA Procedure	394
<i>The Developer's EIA Report</i>	394
<i>Consultation and Public Participation</i>	395
<i>Transboundary Projects</i>	396
<i>The Decision to Grant or Refuse Development Consent</i>	396

<i>Relationship with other Assessment Procedures</i>	397
<i>Communication of the Competent Authority's Decision</i>	398
<i>Remedies and Access to Justice</i>	398
The Strategic Environmental Assessment Directive	402
<i>Scope and Purpose of the SEA Directive</i>	403
<i>The Obligation to Carry Out an SEA</i>	403
<i>Plans and Programmes Subject to Mandatory SEA</i>	403
<i>Screening of other Projects</i>	404
<i>Exemptions</i>	404
<i>The SEA Procedure</i>	405
<i>Environmental Report</i>	405
<i>Consultation of Designated Authorities and of the Public Likely to be Affected</i>	405
<i>Transboundary Consultation</i>	406
<i>Relationship with other Assessment Procedures</i>	407
<i>The Decision</i>	407
<i>Remedies</i>	407
12 Nature and Biodiversity Protection	410
<i>Introduction</i>	410
<i>Changing Narratives: Nature Conservation, Biodiversity Protection and the Safeguarding of Natural Capital</i>	412
<i>The Birds Directive and Habitats Directive: The Twin Pillars of Natura 2000</i>	416
<i>The Birds Directive</i>	416
<i>The Habitats Directive</i>	417
<i>Designation and its Consequences: The Legal Status of SPAS and SACS</i>	419
<i>The Designation Process</i>	420
<i>The Consequences of Designation</i>	421
<i>Designation and its Discontents</i>	422
<i>Biodiversity and Sustainability: The Role of Economic Considerations in Natura 2000</i>	423
<i>Protecting SCIs and the Role of the Precautionary Principle</i>	428
<i>Protective Regimes: The Relation between the Birds and Habitats Directives</i>	429
<i>Timing of Member State Obligations</i>	431
<i>The Management of Protected Sites: Article 6(1) Habitats Directive</i>	432
<i>Avoiding Deterioration and Disturbance: Article 6(2) Habitats Directive</i>	434
<i>Assessing Development: Article 6(3) Habitats Directive</i>	434
<i>Declassification</i>	440
<i>Compensating Biodiversity Losses</i>	441
<i>The Effectiveness of the Birds and Habitats Directives</i>	443
<i>Other Measures</i>	444

Conclusion: Overcoming Institutional and Systemic Dichotomy	445
13 Technological Risk Regulation: Chemicals, Genetically Modified Organisms and Nanotechnology	447
Introduction	447
Dual-Purpose Regulation: Reconciling Market Harmonisation with Health and Environmental Protection	450
EU Chemicals Regulation as a Network	453
<i>The REACH Regulation</i>	454
<i>The CLP Regulation</i>	457
<i>Further Measures</i>	459
Chemicals, GMO and Nano Regulation as Technological Risk Regulation	460
<i>Information Production</i>	460
<i>Risk Management</i>	461
<i>Legitimacy and Effectiveness Challenges of Data-Driven Regimes</i>	463
Regulating Uncertainty	465
<i>Legal Principles: The Requirement to Pursue a High Level of Environmental Protection (HLP) and the Precautionary Principle</i>	466
<i>Claims to Legitimacy: Expertise, Transparency and Participation</i>	468
<i>Claims to Legitimacy: Updating, Review and Monitoring</i>	470
GMO Regulation: A Fraught State of Coexistence	471
<i>The Regulatory Framework</i>	474
<i>Scope for Post-Authorisation Differentiation</i>	475
<i>Coexistence Measures</i>	476
<i>Safeguard Clauses</i>	477
<i>Derogation or 'Opt-Ups' under Article 114(4)–(6) TFEU</i>	480
<i>Article 26(b) DRD: Farewell Internal Market?</i>	480
Nanotechnology: New Rules for New Tools?	483
Conclusion	487
14 Waste	489
EU Waste Policy	489
Waste Framework Directive (WFD)	494
<i>Overview of the WFD</i>	494
<i>What is Waste?</i>	498
<i>By-Product</i>	502
<i>End-of-Waste</i>	504
<i>Hazardous Waste</i>	505
<i>Shipment of Waste</i>	506
<i>Waste Operations</i>	508
<i>Landfills</i>	508

<i>Incineration of Waste</i>	510
<i>Waste Streams</i>	512
<i>Packaging</i>	513
<i>Batteries and Accumulators</i>	514
<i>End-of-Life Vehicles</i>	515
<i>Waste Electrical and Electronic Equipment (WEEE)</i>	516
Future Challenges	517
<i>Index</i>	518