Environmental Regulation of Oil and Gas

Editor **Zhiguo Gao**



Contents

Editor's Preface	<i>xv</i>
List of Tables and Figures	
List of Abbreviations	xxi
List of Contributors	xxvii
Acknowledgments	

Part I – Introduction

Chapter 1 Environmental Regulation of Oil and Gas in the Twentieth	
Century and Beyond: An Introduction and Overview	.3

Zhiguo Gao

I.	Introduction	3
II.	Petroleum Exploration and the Environment	4
Ш.	Petroleum Environmental Regulation in Retrospect	8
	1. Early international legal instruments	9
	2. Environmental Provisions of Domestic Laws	10
IV.	Petroleum Environmental Regulation under International Law	13
	1. Key international treaties	13
	2. Major regional agreements	18
	3. The 'soft law' family	23
	4. Some findings and observations	29
V.	Petroleum Environmental Regulation under National Law	
	1. Statutory approach	32
	2. The contractual approach	35
	3. Integrated legislative approach	37
	4. Some issues and practical considerations	
VI.	Petroleum Environmental Regulatory and Management Tools	40
	1. EIA	40
	2. Environmental management plan/programme	41

	3.	Environmental report	. 41
	4.	Environmental assurance programmes	
	5.	Decommissioning and abandonment fund/plan	
	6.	Environmental monitoring and audit	
VII.		cts of Petroleum Environmental Regulation	
	1.	Change in investment conditions	
	2.	Changes in corporate structure and management	
	3.	Changes in capital and operating costs	
	4.	Limitation on access to exploration acreage	
		Delays or even rejection in project/contract approval	
	6.	Suspension of operations or cancellation of licence	
	7.	Fines and liability.	
	8.	Effect on product and pricing (mainly down stream)	
	9.	Environmental charges and taxes	46
		Environmental litigations and liabilities	
VIII.		v Approaches and Themes in Petroleum Environmental Management	
		Economic Regulatory Approaches	
		New Themes in Petroleum Environmental Regulation	
IX.		nmary and Conclusion	
		·	

Part II – International Regulation

Chapter 2 The Oil and Gas Industry in the Tangled Web	
of Environmental Regulation: Spider or Fly?	59

Ayesha Dias

I.	Introduction	59
II.	International Environmental Law and the Oil and Gas Industry	63
	1. Evolution, basic features and emerging trends	
	2. Emergence of international law affecting the oil and gas industry	
	3. The global environment, international law and the oil and gas industry	
	4. Key international law concepts of primary importance to the oil and g	
	industry	
III.	Regional Environmental Law (REL) and the Oil and Gas Industry	
	1. Onshore operations and installations of the oil and gas industry	
	2. Offshore operations and installations of the oil and gas industry	
	3. The North Sea regime	
	4. Abandonment and decommissioning	
	5. The institutional framework of REL in the EU	
IV.	National Environmental Law (NEL) and the Oil and Gas Industry	
V.	Current and Future Trends in IL, REL, NEL and the Oil and Gas Industry	

Chapter 3 International Legal Regime for the Protection of the Marine	
Environment Against Operational Pollution from Offshore Petroleum	
Activities	93

Sergei V. Vinogradov and Jay Paul Wagner

I.	Introduction	
	1. Background	
	2. Types of operational discharges	
II.	Global regulatory instruments	
	1. The 1982 United Nations Convention on the Law of	f the Sea 99
	2 The 1973/78 MARPOL Convention	
	3. Other global instruments	
	4. "Soft law" provisions	
III.	Regional instruments	
	1. The Baltic Sea	
	2. The Northeast Atlantic	
	3. The Persian/Arabian Gulf	
	4. The Mediterranean Sea	
IV.	Concluding observations	
	1. Global regulations	
	2. Regional approaches	
	3. Recent trends	

Zhiguo Gao

I.	Introduction	
П.	World offshore development and installations	
Ш.	International legal framework on offshore abandonment	
	1. Relevant international conventions	
	2. Relevant regional conventions	
	3. The 'soft law' principles	
IV.	Legal issues and current debates	
	1. Opposing treaty interpretations	
	2. Existing treaty rendered obsolete	
	3. Fundamental change of circumstances	
	4. The issue of desuetude	
	5. Supremacy of the LOS Convention	
	6. Domestic legislation and state practice	
V.	Legislation and practice in the UK	
	1. Position on international law	
	2. Domestic legislation in the UK	

	3. Abandonment practice	161
	4. Problems faced by the UK	
VI.	Major findings and practical considerations	
	1. Findings on international abandonment law and practice	
	2. Some practical recommendations	
VII.	Concluding remarks	

Part III – Regional Regulation

Chapter 5 European Union Environmental Law and Policy	
in Relation to Oil and Gas 171	

Donald A. Reid

I.	Introduction	171
II.	Development of EC environmental policy	172
	1. The Treaty of Rome 1957	
	2. Single European Act	
	3. The Treaty of European Union 1993	
III.	Planning EC environmental policy	
IV.	European Community institutions	
	1. The Commission	
	2. European Parliament	174
	3. The Council of Ministers	175
	4. European Court of Justice	175
	5. Committees	175
V.	Implementation of environmental policy	
	1. Legal instruments	
	2. Legal basis for legislation	
VI.	The application of EC law in member states	
	1. Interpretation of EC law	
	2. The direct effect doctrine	
	3. Compensation for non-implementation	177
VII.	Infringement proceedings and complaints procedure	178
	1. The Commission	
	2. Action by individuals	178
VIII.	EC environmental policy affecting the oil and gas industries	178
	1. Environmental impact assessment	179
	2. Hydrocarbon Licensing Directive	
	3. Controls over air pollution	180
	4. Water pollution	181
	5. Pollution by waste	181
IX.	Decommissioning and abandonment of offshore installations	182
Х.	Some other developing EC legal concepts	183
	1. Civil liability for damage to the environment	183

	2.	Freedom of access to environmental information and third party rights 184
XI.	Cor	nclusion

Robin Griffith

. 187 . 188
100
. 188
. 189
. 190
. 191
. 191
. 193

Chapter 7 Regional Perspectives on Trade and Environment: The European Union* 195

Joachim Scherer

I.	Intro	oduction	195
II.	EU	environmental policy and legal framework	196
	1.	Phases of policy development	196
	2.	Principles and basis of environmental legislation in the EU	197
	4.	"Trade" and "environment": the external and the internal perspective	199
Ш.	Envi	ironmental protection and free trade: conflict or compatibility?	200
	1	"Free trade" and "environmental protection" in the absence of EU rules ?	200
	2.	More stringent national environmental measures in spite of EU legislation	204
	3.	Striking balances between "free trade" and "environmental protection":	
		procedures and regulatory approaches	208
IV.	Con	clusions	211

Part IV – National Regulation

Chapter 8 Environmental Regulation of the Oil and Gas Industry	
in the U.S.A	5

James E. Hickey, Jr.

I.	Introduction	15
II.	Models of US Environmental Regulation 2	:17
	1. Environmental impact assessment model	

	2. The "best technology" model	
	3. The risk assessment model	220
	4. The strict liability model	
III.	The Oil Pollution Act of 1990	
	1. The scope of liability	
	 Certification of financial responsibility 	
	3. Double-hull tanker requirements	
IV.	The Oil Pollution Act five years after enactment	
V.	Conclusion	

Ernest E. Smith

I.	The Disparity Between a Global Environment and Domestic Environmental	
	Regimes	229
П.	The Extraterritorial Application of US Environmental Statutes	
	1. Statutory intent	
	2. Domestic effects: the question of jurisdiction	
	3. Conflict with another state's domestic law or policy	
	4. Other barriers to extraterritoriality	
Ш.	Conclusions	

Jill A. Kotvis

I.	Current Environmental Issues	249
	Are US environmental laws and standards adaptable to the international	
	community and developing nations	255
Ш.	Some observations	

Christopher Napier

I.	Directions in EC environmental protection	259
	1. European Community Fifth Action Programme in relation to the	
	environment and sustainable development	
	2. Commission progress report	
	3. Summary remarks	
П.	Principles of EC environmental protection	

	1. Principles of Environmental policy	
	2. The integrated approach	
Ш.	Directions in the UK environmental policy and legislation.	
	1. The 1997 report This Common Inheritance	
IV.	Common law developments in the UK	
	1	

Part V - Corporate Environmental Management

Amy B. Rosenfeld, Debra L. Gordon and Marianne Guerin-McManus

I.	Inti	roduction	279
II.	The	e new frontier	281
	1.	Liberalization and privatization	281
	2.	Economic and legal incentives	
	3.	Need for foreign capital	283
	4.	Exploration and reserves	284
III.	Env	vironmental impacts and best practices	285
	1.	Environmental roles and responsibilities	286
	2.	Environmental impact assessments	287
	3.	Environmental monitoring and evaluation	288
	4.	Environmental impacts of seismic exploration	
	5.	Environmental impacts of land clearing	
	6.	Environmental impacts of roads	
	7.	Environmental impacts of drilling and production	
IV.	Soc	tial impacts and best practices	
	1.	Social roles and responsibilities	308
	2.	Social impact assessments and management plans	
	3.	Social monitoring and evaluation	
	4.	Best practices: stakeholder participation	314
	5.	Social impacts of access and colonization	
	6.	Social impacts of contact	318
	7.	Health impacts	321
	8.	Social impacts of dependence on outside aid	324
V.	Leg	al and financial mechanisms to promote best practices	
	1.	Legislation	329
	2.	Petroleum codes	333
	3.	Voluntary guidelines	335
	4.	Environmental and social impact assessments	336
	5.	Enforcement of petroleum codes, EIAs and SIAs	338
	6.	Funding mechanisms for conservation	339
	7.	Recommendations	
	8.	Enforcement	344

	9. Contracts	. 345
VI.	Conclusion	
Cha	pter 13 Quality Standards for Corporate	
	ironmental Management	. 353
Eric	e Borremans	
I.	The Growth of corporate environmental management	353
	1. Phase 1: end of pipe control (1970s and early 1980s)	
	2. Phase 2: prevention (late 1980s and early 1990s)	
	 Phase 3: integration, eco-efficiency and sustainability (mid-1990s ongoir 354 	
П.	The development of environmental management standards	354
	1. The roots of EMS standards	
	 Eco-Management and Audit Scheme	
	3. ISO 14001	
III.	Key issues relating to EMS certification	
	1. EMAS	
	2. ISO 14001	
IV.	Preparing for the future: what are the key issues?	
Cha	apter 14 Managing Environmental Legal Risks in Oil and Gas	
	bloration and Production Activities	359
1		
Kit	Armstrong	
I.	Introduction	359
П.	Major sources of environmental law relevant to oil and gas exploration and	
	production operations	
	1. General issues	
	2. Key treaties and conventions	
	3. Major international agreements	
	4. National laws	
	5. Multilateral development and other funding institutions	
	6. International governmental organizations	
	7. Standards organizations	
-	8. Industry standards and guidelines	
Ш.	Environmental issues companies should anticipate	371

xii

1.

2.

1.

2.

IV.

V.

	1.	General issues	384
	2.	Recommended activities	385
VI.	Co	nclusion	389

Part VI – Contractual, Downstream and Sustainability Issues

Chapter 15 Environmental Concepts and Terms in Petroleum	
Legislation and Contracts: A Preliminary Study 393	

Ibibia Lucky Worika

I.	Introduction	393
П.	Conceptual problem of terminology	
	1. Genesis of environmental concepts and terms	
	2. Definitions and content	397
III.	Efficacy and rationale for continued retention of environmental concepts	
	and terms	403
	1. Advantages	403
	2. Disadvantages	405
	3. Rationale for continued retention	
IV.	Supportive and complementary suggestions	408
	1. Best practicable environmental option (BPEO)	408
	2. Sustainable petroleum development practice (SPDP)	410
V.	Conclusion	413

Chapter 16 Downstream Energy: Resuming a Leadership Role...... 417

John C. Gault

I.	Introduction	417
П.	Origins of energy industries	418
Ш.	Forthcoming challenges	418
IV.	Recent achievements	420
V.	Reestablishing industry leadership	422

Stanley Nwabuishi Onuosa

I.	Introduction	433
II.	The purpose of sustainable development	434
	Sustainable Development of Petroleum Resources: Its Implications	

IV.	The Antagonist's Perception	438
V.	The Protagonist's Perception	440
	Resolving the Conflict	
	Pathway to Sustainable Development of Petroleum Resources	
	Conclusion	

Appendices

Appendix 1 International Treaties and Documents in Relation to the Oil and Gas Industry 453
Appendix 2 IMO Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone
Appendix 3 Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation
of the Continental Shelf and the Seabed and its Subsoil 465
Appendix 4 Protocol Concerning Marine Pollution Resulting From Exploration and Exploration of The Continental Shelf
Appendix 5 World Bank Guidelines for Environmental Assessment of Oil and Gas Development Projects
Appendix 6 Shell's Environmental Policy and Guidelines 525
Appendix 7 Pertamina's Policy for Environment and Safety 529
Appendix 8 Environmental Checklist for Petroleum Exploration and Production Activities
Appendix 9 Petroleum Environmental Glossary 547
Selected Bibliography 569
Index