

Table of Contents

The Author	3
List of Abbreviations	13
General Introduction	15
§1. GENERAL INFORMATION	15
I. Geography and Population	15
A. Geography	15
B. Population	16
II. Legal and Political Structure	16
A. General	16
B. Decision-Making Power and Competencies	17
III. Economic Characteristics	17
IV. Social and Cultural Characteristics	18
V. The Environment	19
VI. Main Environmental Problems	21
§2. BASIC PRINCIPLES OF ENVIRONMENTAL LAW	21
§3. HISTORICAL BACKGROUND	22
§4. LEGAL STRUCTURE	23
I. Sources of Law	23
A. English Common Law	23
B. Statutory Laws	24
C. Sources of Environmental Law	24
II. Judicial System	25
A. The Judiciary	25
B. The Shariah Court and Muslim Law	26
C. Other Tribunals	26
III. Environmental Governance: Singapore's Environmental Management System for Pollution Control	27
A. Prevention: Land Use Planning	27
B. Monitoring and Enforcement	29
C. Penalties for Breach	31

Table of Contents

§5. INSTITUTIONAL STRUCTURE AND GOVERNANCE	31
I. The Ministry of Environment and Water Resources (MEWR)	32
A. Agencies for Pollution, Public Health and Water Management	32
1. The National Environment Agency (NEA)	32
2. The Public Utilities Board (PUB)	34
II. The Ministry of National Development (MND)	35
III. Other Ministries and Statutory Boards	36
§6. ENVIRONMENTAL POLICY	37
I. Effectiveness in Environmental Policy	37
II. International Conventions/Treaties	38
III. Regional Cooperation: ASEAN	38
IV. Transboundary Air Pollution and Collaboration: The Indonesian Haze	42
Part I. Pollution Control	45
Chapter 1. General Law	45
§1. INTRODUCTION	45
§2. ENVIRONMENTAL IMPACT ASSESSMENTS (EIAs)	45
§3. THE RIGHT TO A HEALTHY ENVIRONMENT	46
§4. ENVIRONMENTAL MANAGEMENT WITHIN CORPORATIONS	46
Chapter 2. Air Pollution	48
§1. GENERAL	48
§2. SPECIFIC LEGISLATION	49
§3. AMBIENT AIR QUALITY STANDARDS	49
I. Emissions from Stationary Sources	49
A. Air Emission Standards	49
B. Dark Smoke and Impurities	49
C. Control of Fuel Quality	50
D. Scheduled Premises	50
E. Categories of Offences & Penalties	51
F. Liability	51
II. Emissions from Vehicular Sources	52
A. Control of Fuel Quality	53
B. Emission Standards	53
C. Owners of Motor Fleets	54
D. Offences	55

E. Green Vehicles	55
III. Emissions from Other Sources	56
A. Open Burning	56
B. Transboundary Pollution	56
§4. INDOOR AIR QUALITY	57
I. Prohibition against Smoking in Public Places	57
II. Factory Air Quality & Safety	58
III. Office Air Quality	58
IV. Legionnaire's Disease: Cooling Towers and Water Fountains	59
Chapter 3. Water Pollution	60
§1. SURFACE AND GROUND WATER	60
§2. SEWAGE AND DRAINAGE INFRASTRUCTURE	60
I. Legislation	61
A. Sewerage & Trade Effluent	61
1. Offences	62
2. Deep Tunnel Sewerage System	62
B. Toxic Substances	63
C. Silt, Earth and Total Suspended Solids	63
D. Clean Up	63
§3. DRINKING WATER	64
Chapter 4. Hazardous Substances	65
§1. LAWS	65
§2. IMPORT, EXPORT, SALE, STORAGE AND USE OF HAZARDOUS SUBSTANCES	65
§3. TRANSPORT OF HAZARDOUS SUBSTANCES	65
§4. ENFORCEMENT AND OFFENCES	66
§5. REGIONAL COLLABORATION	67
§6. PETROLEUM AND FLAMMABLE MATERIALS	67
Chapter 5. Waste Management	68
§1. INTRODUCTION	68
§2. LEGISLATION	69

Table of Contents

I. Definitions of Waste	69
II. Waste Collection	70
III. Offences	70
§3. INDUSTRIAL WASTE AND TOXIC INDUSTRIAL WASTE	72
I. Laws	72
A. Toxic Industrial Waste	72
II. Electronic Tracking of Wastes	73
III. Solid Residues and Fly-Ash	73
IV. Biohazardous Wastes	74
V. Disposal of Asbestos Wastes	74
VI. Offences	74
§4. MULTILATERAL ENVIRONMENTAL AGREEMENTS (MEAS)	75
I. The Basle Convention: Transboundary Movement of Hazardous Wastes	75
II. The Stockholm Convention on Persistent Organic Pollutants (POPs)	75
III. The Rotterdam Convention on Prior Informed Consent (PIC)	76
Chapter 6. Soil Contamination	77
Chapter 7. Noise	78
§1. NOISE FROM VEHICULAR TRAFFIC AND MASS RAIL TRANSIT (MRT)	78
§2. NOISE FROM CONSTRUCTION	79
§3. NOISE WITHIN FACTORIES AND INDUSTRIAL PREMISES	80
§4. NOISE EMANATING FROM FACTORIES	81
§5. AIRCRAFT NOISE	81
§6. NOISE AS A PUBLIC NUISANCE	83
§7. NOISE MONITORING	83
Chapter 8. Radiation	84
§1. INTRODUCTION	84
§2. RADIATION PROTECTION ACT	84
§3. THE RADIATION PROTECTION REGULATIONS	85

I. Radiation Protection (Ionising Radiation) Regulations 2000	85
II. The Radiation Protection (Non-Ionizing) Regulations	86
III. The Radiation Protection (Transport of Radioactive Materials) Regulations	86
Chapter 9. The Ozone	88
§1. OZONE DEPLETION AND CLIMATE CHANGE	88
§2. ADDRESSING CLIMATE CHANGE	89
§3. ENERGY AND RESOURCE EFFICIENCY	93
I. Power Generation	94
II. Industry	94
III. Transport	95
IV. Buildings	95
V. Households	96
§4. ENVIRONMENTAL TECHNOLOGY AND RESEARCH	96
§5. ENERGY CONSERVATION ACT (ECA), 2012	97
Chapter 10. The Marine Environment	99
§1. INTRODUCTION & MARPOL	99
§2. OFFENCES	101
§3. BULK OIL TANKERS	102
§4. TANKER CLEANING AND THE DISPOSAL OF SLUDGE AND SLOP OIL	103
I. Carriage of Dangerous Goods	103
Part II. Nature Conservation and Management	105
Chapter 1. Monuments and Landscapes	105
§1. THE MAN-MADE LANDSCAPE/ENVIRONMENT	105
I. Conservation of the Built Environment	105
A. National Monuments	105
II. Conservation Areas	107
§2. LANDSCAPE PROTECTION	107

Table of Contents

Chapter 2. Parks and Nature Reserves	109
§1. OVERVIEW	109
I. Protection of Flora and Fauna in National Parks and Nature Reserves	110
A. Protection for Animals in National Parks and Nature Reserves	111
B. Protection for Trees and Plants in National Parks and Nature Reserves	111
II. Protection of Flora and Fauna within a Public Park	112
A. Protection of Fauna within a Public Park	112
B. Protection of Flora within a Public Park	113
III. Protection of Flora and Fauna in other Parks in Singapore	113
A. Jurong Town Corporation Parks	113
B. Sentosa Development Corporation Parks	114
C. Catchment Area Parks	114
D. Tree Conservation Areas	115
E. Heritage Road Green Buffers	115
F. Heritage Trees	116
G. Planting Areas and Street Scapes	116
H. Cutting Down Trees	117
I. Taking of Timber and other Natural Resources	117
Chapter 3. Wildlife Protection	118
§1. GENERAL PROTECTION FOR WILD ANIMALS AND BIRDS	118
§2. THE PROTECTION OF MARINE LIFE	119
§3. TRADE IN ENDANGERED SPECIES: CITES	120
§4. PROTECTION OF BIOLOGICAL DIVERSITY	121
§5. THE DEVELOPMENT VERSUS CONSERVATION DILEMMA	123
Chapter 4. Subsoil and Minerals	124
Part III. Zoning and Land-Use Planning	125
§1. HISTORY	125
I. The Master Plan	125
II. The Concept Plans	126
A. Concept Plan 1971	126
B. The 1991 Revised Concept Plan: 'A Tropical City of Excellence'	127
C. Concept Plan 2001 'Towards a Thriving World-Class City'	127

Table of Contents

III. Development Guide Plans (DGPs)	128
IV. The Current Master Plan (2008) and Concept Plan (2011)	128
Part IV. Liability Questions	131
Part V. The Future: Building Capacity in Environmental Law and Management and the Challenges of Climate Change	133
Selected Bibliography	135
Index	139