

Contents

Overview of Waste Management Options: Their Efficacy and Acceptability	1
<i>Kit Strange</i>	
1 Introduction	1
2 Key Issues	1
3 What Is Waste?	2
4 How Is Waste Managed?	7
5 Recycling	33
6 What Is Integrated Waste Management?	34
7 Trends in Waste Management	39
8 Public Attitudes	43
9 Conclusions	50
Health Risks of Materials Recycling Facilities	53
<i>Toni Gladding</i>	
1 Introduction	53
2 Previous Research Concerning Waste Handsorting	58
3 A Further Study on MRFs	67
4 Conclusions	71
5 Acknowledgements	72
Microbial Emissions from Composting Sites	73
<i>Jillian R. M. Swan, Brian Crook and E. Jane Gilbert</i>	
1 Introduction	73
2 Bioaerosol Components	78
3 Potential Ill Health Effects among Compost Workers	84
4 Compost Site Case Studies	86

Contents

5 Ill Health Case Studies	96
Health Effects and Landfill Sites	103
<i>Andy Redfearn and Dave Roberts</i>	
1 Introduction	103
2 Overview of Epidemiological Studies	104
3 Adverse Birth Outcomes	116
4 Theoretical Basis of Purported Effects	129
5 Summary	139
Emissions from Solid Waste Management Activities	141
<i>Paul T. Williams</i>	
1 Introduction	141
2 Waste Landfill	141
3 Incineration	153
4 Other Waste Treatment Processes	165
Health Impacts of Waste Incineration	171
<i>Ari Rabl and Jo V. Spadaro</i>	
1 Introduction	171
2 Emissions	174
3 Dispersion and Peak Concentration	179
4 Health Impacts and Costs	182
5 Monetary Valuation	185
6 Calculation of Damage	186
7 Damage Costs per Kilogram of Pollutant	189
8 Damage Costs per Kilogram of Waste	189
9 Conclusions	192
10 Acknowledgements	193
Methodological Issues Related to Epidemiological Assessment of Health Risks of Waste Management	195
<i>Helen Dolk</i>	
1 Introduction	195
2 The Design of an Epidemiological Study	196
3 Disease/Health Measurement	197
4 Exposure Measurement	199
5 Confounding	204
6 Statistical Considerations	207
7 Criteria for Causation	209
8 Use of Epidemiological Studies in Risk Management	210
Subject Index	211