
Sustainability Assessment

Applications and opportunities

Edited by Robert B. Gibson

Contents

<i>List of illustrations</i>	vii
<i>Notes on contributors</i>	ix
<i>Preface</i>	xii
1 Foundations: sustainability and the requirements for getting there	1
ROBERT B. GIBSON	
2 Applications: from generic criteria to assessments in particular places and cases	16
ROBERT B. GIBSON	
3 Building and applying a sustainability assessment framework: the Panel review of the Mackenzie Gas Project	42
ROBERT B. GIBSON	
4 Peanut shells in the bigger picture: sustainability assessment in the agricultural and energy systems of Senegal	61
KYRKE GAUDREAU	
5 Sustainability effects of a Brazilian sugarcane ethanol mill	78
CARLA GRIGOLETTO DUARTE AND KYRKE GAUDREAU	
6 The sustainability assessment of the South West Yarragadee Water Supply Development in Western Australia	96
JENNY POPE	
7 The Lower Churchill Panel Review: sustainability assessment under legislative constraints in Canada	110
MEINHARD DOELLE	

8	Sustainability assessments designed for multiple functions: five cases about water resources, nanotechnologies and communities	127
	ARNIM WIEK, CHRISTOPHER KUZDAS, RIDER FOLEY, LAUREN WITHYCOMBE KEELER, NIGEL FORREST AND BRADEN KAY	
9	Electricity system planning and sustainability assessment in Ontario, Canada	146
	MARK WINFIELD	
10	Using strategic thinking and critical decision factors to achieve sustainability: three cases in Portugal	169
	MARIA ROSÁRIO PARTIDÁRIO	
11	Applying a sustainability assessment framework to recovery plans in eastern Tohoku, Japan	194
	YOICHI KUMAGAI	
12	The mitigation hierarchy and beyond: guiding appropriate biodiversity trade-offs in assessments for sustainability	225
	SUSIE BROWNLIE AND JO TREWEEK	
13	Opportunities: finding best openings for influential applications	246
	ROBERT B. GIBSON	
	<i>Appendix 1 Generic criteria for sustainability assessment evaluations and decisions</i>	267
	<i>Appendix 2 Generic trade-off rules for sustainability assessments</i>	271
	<i>Index</i>	273