# Sustainability Accounting and Accountability

Third Edition

Matias Laine, Helen Tregidga and Jeffrey Unerman



## **Contents**

List of figures List of tables		xix xxi	
	Acknowledgements		
	out the authors	XXIII XXV	
210	our the duritors	ΛΛΫ	
1	Introduction to sustainability accounting and accountability	1	
PA	RT I		
Set	ting the context	9	
2	Background and global context	11	
4	Dackground and grobal context	11	
3	Accountability, stakeholders, materiality and externalities:		
	Examining key concepts	34	
	RT II		
Ac	counting for sustainability	55	
4	Sustainability management accounting and control	57	
5	Sustainability reporting: History, frameworks and regulation	83	
6	The sustainability reporting process	103	
7	ESG investments and risk management	124	
8	External accounting	147	
0	External accounting	14/	

#### PART III

Issues in accounting for sustainability		165
9	Accounting for climate	167
10	Accounting for water	192
11	Accounting for biodiversity	214
12	Accounting for human rights	237
13	Accounting for economic inequality	260
PAR	TIV	
	Conclusion	
14	Closing remarks	285
Inde	Index	

## **Detailed Contents**

Lis Acl	List of figures List of tables Acknowledgements About the authors	
1	Introduction to sustainability accounting and accountability	1
	Introduction to the content and structure of the book	3
	A note for instructors	6
	Conclusion	6
PA	RT I	
Set	tting the context	9
2	Background and global context	11
	2.1 Sustainability and sustainable development	12
	2.1.1 Defining the terms	12
	2.1.2 The United Nations Sustainable Development Goals	12
	2.1.3 A brief history	14
	2.1.4 Contested concepts	15
	2.1.5 Doughnut economics	17
	2.2 Sustainability and the economy	19
	2.2.1 Capitalism	19
	2.2.2 Globalisation	20
	2.3 Sustainability and organisations	20
	2.3.1 Organisations and their context	21
	2.3.2 Organisational impacts and dependencies	21
	2.3.3 Linear and circular economy	22
	2.3.4 The role of organisations in shaping the context	23

			nability accounting and accountability	24 24
			Problems with conventional accounting	
			The role of accounting in transitioning towards sustainability	24
			Sustainability accounting and accountability practices	25
			The accounting profession	26
			unting for sustainability in different organisational settings	27
		2.5.1	Private sector organisations	27
			2.5.1.1 Corporations	27
			2.5.1.2 Small and medium sized enterprises (SMEs)	27
			2.5.1.3 Partnerships and co-operatives	28
			2.5.1.4 Other emerging for-profit organisational forms	28
			Public sector organisations	28
		2.5.3	The third sector	29
			2.5.3.1 Non-government organisations	30
			Summary of different organisational settings	31
	2.6	Conc	lusion	31
3	Acco	ountal	bility, stakeholders, materiality and externalities:	
	Exar	ninin	g key concepts	34
	3.1	Accou	untability	34
		3.1.1	What is accountability?	35
		3.1.2	Legal and moral duty	36
		3.1.3	Social licence to operate and legitimacy	37
		3.1.4	Accountability and the social licence to operate	38
		3.1.5	The broadening of accountability	39
			Who is an organisation accountable to?	39
	3.2	Stakel	holders	40
		3.2.1	Stakeholder mapping: Who are an organisation's	
			stakeholders?	40
		3.2.2	Stakeholder salience: Power, legitimacy and urgency	41
			Stakeholder engagement and stakeholder management	43
			Stakeholder and accountability in different types	
			of organisations	44
		3.2.5	Accountability to stakeholders: But for which issues?	46
			riality	46
			Material impacts and dependencies	47
			Materiality is subjective	47
			Materiality and sustainability reporting	48
			nalities	49
			Externalities and their relevance to sustainability	
			accounting and accountability	50
		3.4.2	Accounting for externalities	50
			Materiality and externalities	51
			lusion	52

Acc	ounting for sustainability	55
4	Sustainability management accounting and control	57
	4.1 Introduction to management accounting and control	58
	4.2 Management accounting and control and sustainability	58
	4.2.1 Defining sustainability management accounting and control	59
	4.2.2 Diversity of sustainability management accounting	
	and control practices	59
	4.2.3 Inherent flexibility in sustainability management accounting	
	and control practices	60
	4.2.4 Defining sustainability management accounting and control	
	summary	60
	4.3 Some sustainability management accounting tools and practices	61
	4.3.1 Material flow cost accounting	61
	4.3.2 Life-cycle assessment	62
	4.3.3 Social return on investment	63
	4.3.4 Sustainable investment appraisal	65
	4.3.5 Key performance indicators (KPIs)	66
	4.3.6 Cost accounting	67
	4.3.7 Summary of tools and practices	68
	4.4 Sustainability management accounting and control:	
	Key considerations	68
	4.4.1 The level of analysis: What is the entity being measured?	69
	4.4.2 The scope of analysis: What are the boundaries?	70
	4.4.3 Materiality: What issues should be assessed and focused on?	71
	4.4.4 The role of externalities	72
	4.4.5 Valuation: Which metrics are being used, how and why?	73
	4.4.5.1 Qualitative and quantitative information	73
	4.4.5.2 Relative vs absolute numbers	73
	4.4.5.3 Monetary vs physical information	74
	4.4.6 Timeframe: What is a useful timeframe?	75
	4.4.7 Summary of key considerations	76
	4.5 Challenges and future developments	76
	4.5.1 Ensuring sustainability management accounting is core	
	not peripheral	76
	4.5.2 Ensuring the relevance of indicators used	77
	4.5.3 Understanding why organisations do (not) implement	
	sustainability management accounting and control	77
	4.5.4 The role of the accounting profession	79
	4.6 Conclusion	80
5	Sustainability reporting: History, frameworks and regulation	83
	5.1 Introduction to the practice of sustainability reporting	84
	5.1.1 Different names and forms of sustainability reporting	84
	5.1.2 The purpose of sustainability reporting	85
	5.1.3 The focus of this chapter	86

### PART II

	5.2	A history of sustainability reporting	86
		5.2.1 Early pioneering examples	87
		5.2.2 Environmental reporting and reporting initiatives	87
		5.2.3 The Global Reporting Initiative and the broadening	
		of reporting	88
		5.2.4 Reporting becomes mainstream	88
		5.2.5 The continuous evolvement of reporting	88
	5.3	Characteristics of sustainability reporting	90
		Sustainability reporting standards and frameworks	92
		5.4.1 The Global Reporting Initiative	92
		5.4.2 Integrated reporting	94
		5.4.3 Sustainability Accounting Standards Board	94
		5.4.4 The CDP and other frameworks	96
		5.4.4.1 The CDP	96
		5.4.4.2 The Taskforce for Climate-Related Financial	
		Disclosure	96
		5.4.4.3 SDGs and sustainability reporting	97
		5.4.5 Summary of reporting standards and frameworks	97
	5.5	Regulating sustainability reporting: An ongoing debate	98
		5.5.1 Increasing regulatory initiatives	98
		5.5.2 Should sustainability reporting be regulated – and how?	99
	5.6	Conclusion	100
6	The	e sustainability reporting process	103
0		Introducing the hierarchical staged process model	104
	0.1	6.1.1 Introducing strategic and holistic accountability	104
	62	Why does the organisation report?	106
		To whom is the reported information directed?	110
		6.3.1 Determining what stakeholders are interested in	111
	6.4	What information is reported on?	113
		6.4.1 Deciding report content: Materiality and	-
		stakeholder engagement	113
		6.4.2 Materiality assessment	114
		6.4.3 What level of detail is required?	115
	6.5	In what form and format is the information communicated?	116
	6.6	Sustainability assurance	117
		6.6.1 Sustainability assurance and financial auditing practices	117
		6.6.2 Frameworks for sustainability assurance	118
		6.6.3 Sustainability assurance issues and challenges	119
	6.7	The role of sustainability reporting and its limits	120
	6.8	Conclusion	121
7	ESC	G investments and risk management	124
,		Introduction to financial markets and sustainability considerations	124
	,.1	7.1.1 Financial markets, risk and return: Bringing sustainability	125
		into the mix	125

	107
7.2 Financial markets and ESG	127 129
7.2.1 Types of ESG investing	129
7.3 An organisational perspective: Risk, future uncertainty	131
and sustainability	131
7.3.1 Identifying risks related to sustainability	131
7.3.2 Illustrating increased uncertainty: Climate change 7.3.3 Risk assessment	132
	134
7.3.4 Decision-making and communication	
7.4 How sustainability features in financial markets	137
7.5 The role of ESG-scores, ratings and ranking lists	139
7.6 Financial markets, ESG, accounting and accountability	142
7.6.1 ESG and financial performance	142
7.6.2 Investor engagement	143
7.7 Conclusion	144
8 External accounting	147
8.1 A brief note on terminology and focus	148
8.2 External accounting practices and their emergence	148
8.2.1 Early examples and development	149
8.3 Motivations and rationales to produce external accounts	150
8.4 Forms of external accounting	154
8.5 Producers and audiences of external accounts	156
8.5.1 Producers of external accounts	157
8.5.2 Audiences	159
8.6 Some limits and the potential of external accounting practices	161
8.6.1 Some critiques of external accounting practices	161
8.6.2 How external accounting challenges conventional views	
of accounting	162
8.7 Conclusion	163
PART III	
Issues in accounting for sustainability	165

9	Accounting for climate	167
	9.1 Climate change: An issue of critical importance	168
	9.1.1 Climate change: A brief introduction	168
	9.1.2 Climate change: The consequences	169
	9.1.3 A note on terminology	170
	9.2 What has climate change got to do with organisations	
	and accounting?	171
	9.2.1 Regulation, co-ordination and collaboration	171
	9.2.2 Impacts and dependencies	173
	9.2.3 Direct and indirect emissions: The three scopes of carbon	
	accounting	174
	9.3 Carbon accounting and accountability practices	176

	9.3.1 Carbon financial accounting	177
	9.3.1.1 Emissions trading schemes	177
	9.3.1.2 Climate change, valuation of assets and consideration	
	of risks	178
	9.3.2 Climate focused management accounting and control	180
	9.3.2.1 The role of assumptions in carbon accounting	
	and decision-making	181
	9.3.2.2 Internal carbon pricing to assist organisational	
	decision-making	182
	9.3.3 Carbon and climate disclosure and reporting	183
	9.3.3.1 Carbon self-reporting by organisations	183
	9.3.3.2 Disclosures to CDP	184
	9.4 Accounting and the climate emergency: Some key issues requiring further consideration	105
		185 185
	9.4.1 Discussing carbon emissions in relative and absolute terms	185
	9.4.2 Implications of commensuration and marketisation 9.4.3 Carbon offsetting	180
	9.4.4 Consumers, carbon footprints and product labels	189
	9.5 Conclusion	190
		170
10	Accounting for water	192
10	10.1 Water as an issue of critical importance	193
	10.1.1 Sustainable water management	194
	10.1.2 The importance of context	195
	10.1.3 Water is a complex and multifaceted issue	196
	10.2 What has water got to do with organisations and accounting?	197
	10.2.1 Impacts and dependencies	198
	10.2.2 Water risks	198
	10.2.3 Implications water has for accounting and accountability	199
	10.3 Key institutions and frameworks relating to water	200
	10.3.1 The United Nations (UN)	200
	10.3.2 Water regulation and governance	200
	10.3.3 Other water initiatives	201
	10.4 Water accounting and reporting practices	202
	10.4.1 Water measurement and management accounting	
	practices	202
	10.4.1.1 Water footprinting	203
	10.4.2 Water reporting	204
	10.4.2.1 Frameworks for corporate water reporting	204
	10.4.3 Summary of water accounting practices	205
	10.5 Water accounting and accountability: Some issues	
	going forward	206
	10.5.1 General issues concerning water accounting	<b>2</b> 0-
	in organisations	207
	10.5.2 Volumetric water accounting	208
	10.5.3 Accounting and the pricing of water	208

	10.5.4 How useful is water reporting?	210
	10.5.5 Levels and timing of water reporting	211
	10.6 Conclusion	212
11	Accounting for biodiversity	214
	11.1 Biodiversity loss as key sustainability issue	215
	11.1.1 Biodiversity loss and the sixth mass extinction	216
	11.1.2 Ecosystem services	216
	11.1.3 Why biodiversity is important	217
	11.2 What has biodiversity got to do with organisations	
	and accounting?	218
	11.2.1 Impacts and dependencies	218
	11.2.2 Biodiversity and accounting	219
	11.3 Institutions and initiatives relating to biodiversity	220
	11.3.1 International level initiatives	220
	11.3.1.1 The Convention on Biological Diversity	220
	11.3.1.2 The UN Sustainable Development Goals	220
	11.3.1.3 The International Union for Conservation	224
	of Nature (IUCN)	221
	11.3.1.4 The Intergovernmental Science-Policy Platform	221
	on Biodiversity and Ecosystem Services (IPBES)	221
	11.3.2 Frameworks and initiatives on assessing and	222
	valuing biodiversity	ZZZ
	11.3.2.1 The Economics of Ecosystems and	222
	Biodiversity (TEEB)	222
	11.3.2.2 The Natural Capital Coalition 11.3.2.3 The WBCSD Framework for Corporate	
	Ecosystems Valuation (CEV)	223
	11.3.3 Summary of key institutions and initiatives	223
	11.4 Biodiversity accounting and accountability practices	224
	11.4.1 Reporting biodiversity	224
	11.4.1.1 Biodiversity in reporting frameworks	224
	11.4.1.2 Biodiversity reporting by various	221
	organisational types	225
	11.4.2 Recording biodiversity	227
	11.4.2.1 The bottom up approach to recording	,
	biodiversity	227
	11.4.2.2 The top down approach to recording	,
	biodiversity	228
	11.4.3 Measuring biodiversity	228
	11.4.3.1 The numerical approach	228
	11.4.3.2 The valuation approach	229
	11.5 Key debates surrounding biodiversity accounting	
	and accountability	230
	11.5.1 What constitutes good biodiversity reporting?	231
	11.5.2 How complete are attempts to record	
	biodiversity?	232

	11.5.3 How should we value biodiversity?	232
	11.5.4 Summary of key debates	234
	11.6 Conclusion	234
12	Accounting for human rights	237
	12.1 Human rights	238
	12.1.1 Rana Plaza	238
	12.1.2 Modern slavery	239
	12.1.3 Conflict minerals	240
	12.1.4 Introduction to human rights summary	241
	12.2 What have human rights got to do with organisations	
	and accounting?	241
	12.2.1 Organisational impacts on the rights of humans	241
	12.2.2 Human rights and organisational risk	242
	12.3 Human rights protection organisations and regulations	242
	12.3.1 The United Nations	242
	12.3.1.1 The UN Guiding Principles of Business	
	and Human Rights	243
	12.3.1.2 The International Labour Organization	244
	12.3.1.3 The UN Sustainable Development Goals	245
	12.3.2 OECD Guidelines for Multinational Enterprises	245
	12.3.3 Governments and national laws	245
	12.3.3.1 Modern slavery acts	246
	12.3.3.2 Conflict minerals regulation	246
	12.3.4 International NGOs	246
	12.3.5 Summary of human rights protection organisations	2.17
	and regulations	247
	12.4 Accounting for human rights practices	247
	12.4.1 Accounting for human rights	248
	12.4.2 How accounting can enhance accountability	0.40
	for human rights	248
	12.4.2.1 Human rights due diligence	249
	12.4.2.2 Accountants, accounting functions	250
	and human rights 12.4.3 Human rights reporting and disclosure	250 250
	12.4.3.1 Sustainability reporting frameworks	250
	12.4.3.2 The UN Guiding Principles Reporting	251
	Framework	252
	12.4.3.3 Regulated reporting practice	252
	12.4.4 Summary of accounting for human rights practices	255
	12.5 Developing human rights accounting and accountability practices	254
	12.5.1 Will better reporting and greater transparency	231
	improve human rights?	254
	12.5.2 Reporting boundaries and accountability	256
	12.5.2 Summary of questions concerning accounting	250
	for human rights	257
	12.6 Conclusion	258

13	Accounting for economic inequality	260
	13.1 What is economic inequality and why is it a sustainability issue?	261
	13.1.1 What is economic inequality?	261
	13.1.2 Measuring economic inequality	262
	13.1.3 Causes of economic inequality	263
	13.1.4 So why is economic inequality a sustainability problem?	264
	13.2 What has economic inequality got to do with organisations and	
	accounting?	266
	13.2.1 How economic inequality affects organisations	266
	13.2.2 How organisations and accounting can affect	
	economic inequality	267
	13.2.3 Summary of how accounting, organisations and economic	
	inequality are connected	267
	13.3 Economic inequality: Relevant institutions and organisations	268
	13.3.1 International organisations	268
	13.3.1.1 The United Nations Development	
	Programme (UNDP)	268
	13.3.1.2 The International Labour Organization (ILO)	268
	13.3.1.3 Oxfam International	268
	13.3.2 International social movements	269
	13.3.2.1 The Occupy Movement	269
	13.3.2.2 Living wage campaign groups	269
	13.3.3 National tax, income and workplace policies	270
	13.4 Accounting and accountability for economic inequality	270
	13.4.1 The organising of economic activity	270
	13.4.2 Income and wages	271
	13.4.3 Taxes, tax avoidance and economic inequality	273
	13.4.4 Economic inequality disclosure practices	275
	13.4.4.1 The Global Reporting Initiative (GRI)	275
	13.4.4.2 Economic inequality in other reporting	
	frameworks and practices	276
	13.5 Economic inequality: What is still left to resolve?	277
	13.5.1 Improving accounting for equality in various	
	organisational forms	277
	13.5.2 Changing accounting logic in relation to labour	278
	13.5.3 Accounting's role in tax	278
	13.5.4 Limits in current reporting practices	280
	13.6 Conclusion	280
	ΓΙ	
Coi	clusion	283

14	Closing remarks	285
	Hope and/or despair?	285
	Accounting and accountability in the transition to sustainability	287