

Cambridge University Press

978-1-107-07816-1 - Philosophy and the Precautionary Principle: Science, Evidence,
and Environmental Policy

Daniel Steel

Table of Contents

[More information](#)*Contents*

<i>List of figure and tables</i>	<i>page</i> ix
<i>Preface</i>	xi
1 The precaution controversy	1
1.1 Introduction	1
1.2 Putting the pieces together	9
2 Answering the dilemma objection	17
2.1 Introduction	17
2.2 The dilemma	19
2.3 A meta-decision rule	21
2.4 Proportionality	26
2.5 Two misunderstandings and an objection	37
2.6 Conclusions	42
3 The unity of the precautionary principle	44
3.1 <i>The</i> precautionary principle?	44
3.2 Arguments for disunity	46
3.3 Catastrophe, maximin, and minimax regret	49
3.4 Robust adaptive planning	62
3.5 Conclusions	68
4 The historical argument for precaution	69
4.1 Learning from history	69
4.2 The case for precaution	70
4.3 Risks and risks	81
4.4 An epistemic objection	89
4.5 Conclusions	94
5 Scientific uncertainty	95
5.1 Uncertainty about uncertainty	95
5.2 Defining scientific uncertainty	97

Cambridge University Press
 978-1-107-07816-1 - Philosophy and the Precautionary Principle: Science, Evidence,
 and Environmental Policy

Daniel Steel

Table of Contents

[More information](#)

viii	<i>Contents</i>	
	5.3 Probability and the limits of precaution	108
	5.4 Conclusions	118
6	Counting the future	120
	6.1 How to count the future?	120
	6.2 Intergenerational impartiality and discounting	122
	6.3 Arguments for the pure time preference	127
	6.4 A new argument for intergenerational impartiality	135
	6.5 Conclusions	143
7	Precautionary science and the value-free ideal	144
	7.1 Science and values	144
	7.2 The argument from inductive risk	146
	7.3 Objections and replies	149
	7.4 Rethinking values in science	160
	7.5 Conclusions	170
8	Values, precaution, and uncertainty factors	171
	8.1 Case study needed	171
	8.2 Uncertainty factors	172
	8.3 Replacing the value-free ideal	178
	8.4 Epistemic precaution	192
	8.5 Conclusions	197
9	Concluding case studies	199
	9.1 Recapping the central themes	199
	9.2 The precautionary principle and climate change mitigation	200
	9.3 Recombinant bovine growth hormone	205
	9.4 REACH	212
	9.5 Future paths for precaution	217
	<i>Appendix</i>	218
	1 Formalizing the precautionary principle	218
	2 Gardiner's Rawlsian maximin rule	225
	3 Munthe's propositions 6 and 7 are equivalent	226
	4 Triggering the precautionary principle	227
	5 Chichilnisky and sustainable welfare	229
	<i>References</i>	234
	<i>Index</i>	254