Frontiers in Ecological Economic Theory and Application

Edited by

Jon D. Erickson

University of Vermont, USA

John M. Gowdy

Rensselaer Polytechnic Institute, USA

ADVANCES IN ECOLOGICAL ECONOMICS

Edward Elgar

Cheltenham, UK • Northampton, MA, USA

Contents

	t of contributors face by Jon D. Erickson and John M. Gowdy	vii x
	•	
PA.	RT I ECOLOGICAL ECONOMIC THEORY	
	An overview of Part I Herman E. Daly	3
1	Wrong in retrospect: cost–benefit analysis of past successes	7
	Frank Ackerman, Lisa Heinzerling and Rachel I. Massey	•
2	Reorienting macroeconomic theory towards environmental sustainability	36
	Jonathan M. Harris	30
3	Growth and equity: dismantling the	
	Kaldor-Kuznets-Solow consensus	53
	Brendan P. Fisher and Jon D. Erickson	
4	Ecological economics as a basis for distributive justice Frank G. Müller	72
PA	RT II BIODIVERSITY AND ECOSYSTEM HEALTH	
	An overview of Part II	93
	Carl N. McDaniel	
5	The technological juggernaut and nature's	
	ecological systems	98
,	Paul P. Christensen	
6	Assessing ecosystem health in Dutchess County, New York	114
	Karin E. Limburg and Karen M. Stainbrook	114
7	Safe minimum standard analysis of the Florida manatee	131
	Barry D. Solomon, Cristi M. Corey-Luse and	
	Kathleen E. Halvorsen	
8	Development in the Adirondack Park, New York:	
	projections and implications	149
	Michale I Glennon and William F Porter	

vi Contents

PART III CLIMATE CHANGE

	An overview of Part III	171
	Stephen H. Schneider	
9	Problems in economic assessments of climate change	
	with attention to the United States of America	176
	Clive L. Spash	
10	Climate change in the Pacific Northwest: valuing snowpack	
	loss for agriculture and salmon	193
	Eban Goodstein and Laura Matson	
11	A contingent behavior analysis of the effects of climate	
	change on national park visitation	211
	Robert B. Richardson	
12	Second-best pollution taxes in the economics of climate change	225
	Richard B. Howarth	
13	Ranking the adaptive capacity of nations to climate	
	change when socio-political goals are explicit	237
	Brent M. Haddad	
ΡΔ 1	RT IV ENERGY	
171	XIIV ENERGI	
	An overview of Part IV	263
	Nathan John Hagens	
14	Energy quality, net energy and the coming energy transition	268
	Cutler J. Cleveland	
15	The Hydrogen Futures Simulation Model: pathways	
	to a hydrogen future	285
	Thomas E. Drennen and Jennifer E. Rosthal	
16	Measuring sustainable energy development with	
	a three-dimensional index	303
	Brynhildur Davidsdottir, Daniel A. Basoli, Sarah Fredericks	
	and Claire Lafitte Enterline	
17	The elasticity of substitution, the capital-energy	
	controversy and sustainability	331
	David I. Stern	
Ind	ex	353