Index

Titles of publications are shown in italics.

Aaron, H. 175
abrupt climate change 95
accounting 336, 337
   Experimental Ecosystem Accounts (SEEA) 320–21, 329
   experimental land accounts, Australia 329–31
wealth accounting 25–38
see also environmental accounting
Acemoglu, D. 257, 273
Acid Rain Program, US 455
adaptation to climate change 463–73
adaptive cycle 93–4
adaptive expectations and increasing returns 306
adaptive management 49–50, 98–100, 108–19, 169
   and human excellence 119–21
Adger, W.N. 96, 193, 465
Adriaanse, A. 63
ageing population 300
Agenda 21 280, 436, 437, 551, 552, 553
Aghion, P. 257
agriculture 517–29
   and biodiversity conservation 523–4
   GM crops 525–7
   organic versus non-organic 521–3
   traditional versus modern 519–21
   water usage 506, 509–10, 511–13
Agyeman, J. 189, 190, 193, 194–5, 200
aid 451
Allen, M.R. 468, 533
Alston, D. 189
Altieri, M.A. 519
Anand, S. 224
anthropocentricity and environmental ethics 105–6
Antweiler, W. 406
Appadurai, A. 560
Aristotelian virtue ethic 119
Aronsson, T. 177–8
Arrow, K. 25, 39, 96, 131, 144, 259, 368, 405
Arthur, W.B. 305–6
asset accounts 322–4
Atkinson, G. 25, 27, 45, 85, 337, 342, 408, 409
Atrostic, B.K. 180
Australia
   experimental land accounts 329–31
   social discount rates 150
axiology and welfarism 161–2
Aylward, B. 457
Azar, C. 152
Babiker, M.H. 247
Baker, M.B. 468
Baldwin, R.E. 271, 402
Banzhaf, S. 74, 75
Barrett, S. 424
Barro, R.J. 35
Basic Needs movement 222
Basu, K. 126, 127
Baudrillard, J. 288
Baumgärtner, S. 42
Beckerman, W. 43, 254
Benaroch, M. 407
benign problems 115
Bennett, J. 176
Bentham, Jeremy 218
Bergman, L. 182
Bernanke, B.S. 241
Berrens, R.P. 167, 172
Berry, J. 554
Bethel New Life, Inc. 200
Betsill, M. 561
Biggs, D. 99
biocapacity 371–2
   and Ecological Footprint 380
   impact of Fukushima nuclear accident 385
   measurement 380–82
biodiversity conservation and agriculture 523–4
Bishop, R.C. 164, 165, 167
Bithas, K. 167
Black, J. 422
Bloch, F. 421
blue water 502, 507–9
Boadman, A.E. 150
Bockstael, N.E. 75
Bogmans, C. 403
Bohle, H.G. 214
Handbook of sustainable development

Böhringer, C. 181, 182
Bollen, J. 490
Bongaarts, J. 298
Botswana, asset accounts 323–4
Boulding, K.E. 41, 253
Bowen, A. 241, 245
Bowen, H. 565
Boye, J.K. 176, 196
Boyd, J. 74, 75
Brand, F. 64, 65
Brännlund, R. 182
Brenkert, A. 465
Brenton, T. 436
Brock, W. 257
Brooks, N. 465
Broome, J. 144
Brown, D.J. 175
Brulle, R. 193
Brundtland process and local action 553
Brundtland Report 1, 221–2, 238, 253, 436, 532, 551
definition of sustainable development 2, 192
Buchholz, W. 144
Buhrs, T. 193
Bulkeley, H. 561
Bulte, E.H. 172, 386
business, governance of 566–8
business-as-usual and welfarism 160–63
precautionary constraints 164–6, 168–9
Cai, D. 410
Calicott, J. Baird 109–10
cap and trade schemes 455–6
capital 55
capital approach 2–3
capital stock 254
critical natural capital 63–8
ecological capital 72
intangible capital 31, 35–6
natural capital 30–33, 72
total capital estimates 31–5
carbon and Ecological Footprints 384
carbon emissions, see emissions
carbon offsets 454–5
carbon taxes 327–8
Carbone, J.C. 182
Carlsson, B. 305
Carraro, C. 420, 422, 423, 424, 424–5, 426
Carroll, A.B. 565, 566
carrying capacity of the Earth 294
Carson, Rachel 252–3
catastrophic risk and social discounting 151–2
Catton, W. 194
CDM (Clean Development Mechanism) 455
Cesar, H. 426
Chambers, Robert 218
Changing Wealth of Nations, The (World Bank) 25
Chatterjee, K. 421
Chavis, Benjamin 189
Chen, Y. 168
Chesapeake Bay 113–14, 116, 120–21
Chichilnisky, G. 133, 136, 149, 403
China
energy policy 540–42
one-child policy 295
social discount rates 150
Chomitz, K. 457
Christen, O. 518
Ciriacy-Wantrup, S. von 164
cities, sustainable 551–62
Clarke, M. 360
Clean Development Mechanism (CDM) 455
Clemens, M. 25, 337, 338, 399
climatic change 94–5
business response 568–73
and Ecological Footprint 374–5
local government action 552
and market failure 240–42
climatic change adaptation 463–73
New York 468–73
Climate Change Adaptation Task Force, New York City 471
climate change mitigation research 476–94
IAMs 483–92
climate policy and social discounting 151
Clinton, President, Executive Order 12898 190–91
co-benefits, climate change mitigation 481–2
coalitions
expansion 423–6
formation 420–23
non-cooperative coalition theory 420–21
Coase theorem 447–50
Cobb, J. 46, 61, 350, 357, 367, 413
Cocoyoc Declaration 435
Cohen, J. 294
Cole, L. 195
Cole, M.A. 257, 261, 406, 407
Collier, P. 451
Commission on Sustainable Development (CSD) 438, 441, 444
commitment and environmental cooperation 424
Common, M.S. 257, 258
common pool resources 50
communities, resilience 96
comparative advantage and environmental concerns 400–401
comprehensive wealth accounting 25–38
conservation constraints and welfarism 164
consumer behaviour and sustainable consumption 283–6
corporate governance 566–8
CSR, see Corporate Social Responsibility
Cutter, S. 190, 214
depth adjusted Net Saving 336
deprivation and vulnerability 212–14
discount rates, see social discounting
double dividend in sustainable consumption 287–8
drèze, J. 141
Eckaus, R.S. 247
ecoagriculture 524
ecological capital 72
ecological collapse 81–5
ecological economics 41–51
Ecological Footprint Atlas 375
Ecological Footprint 46, 371–88
Dobson, A. 81, 559
Dollar, D. 451
discharge of emissions 261–3
decomposition of emissions 283–4
decoupling of economic and resource consumption 283–4
defensive expenditures and GPI calculation 355
denmark, social discount rate 150
decrease in vulnerability 212
development assistance 451
dewees, D.N. 180
dewey, John 110
Dobson, A. 81, 559
double dividend in sustainable consumption 287–8
drèze, J. 141
Drucker, A.G. 172
Dufour, R. 506
Dugmore, A.J. 269
Duncan, R.O. 269
Dunlap, R. 194
Dutch disease 270
earth summit, see United Nations Conference on Environment and Development
ecoagriculture 524
ecoagriculture 524
ecoagriculture 524
ecoagriculture 524
ecoagriculture 524
ecoagriculture 524
economic growth
d and the environment 252–64
green growth 237–48
long term 242–4
role of population and resources 292–4
economic modeling with environmental accounts 326–7
economic policy
green growth 237–48
and resource curse 271–6
economic welfare, see welfare
Economics of Climate Change: The Stern Review 6, 140, 143, 239, 532, 571
‘Economics of the coming spaceship earth, The’ (Boulding) 253
ecosystem accounts 328–31, 333–4
ecosystem functions 73
Ecosystem Health Index (EHI) 356–7
ecosystem services 73–4
ecosystems 72–86
collapse 81–5
competing uses, valuation 77–80
valuation 74–7
Ederington, J. 407
EEIO (environmentally extended input–output) accounting 67
EfAI (Enterprise for the Americas Initiative) 451
efficiency and equity separation 175
and social discounting 141
EHI (Environmental Health Index) 356–7
Ehrlich, P. 296, 304
Ehrlich–Holdren IPAT identity 297–8, 304
EIPRO project 67
EJP (Environmental Justice Paradigm) 194
Ekins, P. 55, 56, 66, 167, 258–9
El Serafy, S. 356, 363
electricity markets, OECD countries 542–3
electricity system, UK
low carbon transition pathway 312–13
techno-institutional complex 308
Ellerman, A.D. 544
Elliott, R.J.R. 406
Elvin, M. 296
emissions
and carbon taxes 327–8, 540
decomposition 261–3
permits, impact on firms 180–81
reduction policies 539–40, 543–5
Emissions Trading Scheme (ETS), EU 456, 544–5
employment and green growth policies 245–7
energy consumption
economic growth and environmental damage 259–60
and IAM analyses 491–2
worldwide 534–6
energy efficiency policies
China 541
OECD countries 546
energy policies 532–46
aims 532–3
China 540–42
developing economies 536–40
Netherlands, transition management 310–11
OECD countries 542–6
energy security and IAMs 490–91
Engels, F. 517
Engerman, S.L. 271
Enkvist, P.-A. 424
Enterprise for the Americas Initiative (EfAI) 451
entitlements and vulnerability 210–11
environment and economic growth 252–64
environmental accounting 319–34
asset accounts 322–4
environmentally related transactions 327–31
flow accounts 324–7
macroeconomic indicators 331–3
environmental bonds 49
environmental change and vulnerability 208
environmental costs and GPI calculation 356–7
environmental ethics 105–7
and adaptive management 108–21
environmental externalities 42–3
environmental functions 56–8
Environmental Health Index (EHI) 356–7
environmental impact and IPAT identity 297
environmental justice 188–201
Environmental Justice Paradigm (EJP) 194
Environmental Justice Populations (Massachusetts) 191
environmental Kuznets curve (EKC) 255–60, 300
criticisms of 258–9
environmental offsets 454–5
environmental policies
benefits and costs 183
and employment and skills 246–7
firm-level impacts 180–81
household level impacts 178–80
market impacts 181–2
environmental pragmatism 106–7
environmental racism 189
environmental and resource economics (ERE) 42
environmental services 297
environmental sustainability 56–63
measuring 61–3
principles and standards 63–5
environmental virtue ethics 107, 111
environmentally extended input–output (EEIO) accounting 67
environmentally related transactions 327–31
Enzensberger, H. 193
equity
and efficiency separation 141, 175
environmental justice 188–201
and environmental quality 196
equity deficit of environmental sustainability 194
intergenerational, see intergenerational equity
intragenerational, see intragenerational equity
equivalence factors and Ecological Footprint 382–3
ESA (US Endangered Species Act) 167
ESRC
Research Group on Wellbeing in Developed Countries 218
Sustainable Technologies Programme (STP) 311
essential harvest 166
ethics
and sustainable development 105–22
and welfare impacts of public decisions 161–3
ETS (Emissions Trading Scheme), EU 456, 544–5
eudaemonic approach to wellbeing 219
European Union
Emissions Trading Scheme 456, 544–5
renewable energy incentives 546
Evans, B. 189, 200
Executive Order 12898 on environmental justice (Clinton) 190–91
exhaustible resources 296
EXIOPOL project 67
Experimental Ecosystem Accounts (SEEA) 320–21, 329
experimental land accounts, Australia 329–31
factor endowments hypothesis (FEH) 406
factor price equalization 402
Falkner, R. 441
Fankhauser, S. 240, 241
Farmer, M.C. 165, 167
feed-in tariffs 539–40, 546
Feldstein, M. 181
Ferreira, S. 35, 343
Fiala, N. 386
finance, green 457–8
financial flows 447–8
financing for sustainable development 446–58
private 454–8
public 450–54
Finite Anonymity (FA) axiom 126–8
firm level impact of environmental policy 180–81
fiscal incentives for sustainable development 446; see also taxation
Fischer-Kowalski, M. 381
Fisher, I. 26, 28, 38, 368
fisheries
ecosystem valuation 75–6
management and SMS 167
fishing communities, resource dependency 96–7
Flaaten, O. 410
Fleuraeby, M. 127, 482
Floering, I. 271
flow accounts 324–7
Folke, C. 98
Folmer, H. 426
food supply chains and sustainable water use 510–11
foreign aid 451
foreign debt and GPI calculation 355
fossil fuels 533
subsidies 536
Foster, J. 60
Foster, S. 195
Founex Report 434
four box model 47–8
4-capitals model 55
Foxon, T.J. 243
Frame, D.J. 468
Frankel, J.A. 406
Freeman, C. 243, 305
Frey, B.S. 219
Friedman, M. 565
Friends of the Earth ‘Measuring Progress’ ISEW calculator 62
fugitive water 502
Fukushima nuclear accident 385
Fullerton, D. 176, 185
Funtowicz, S. 112
future reward preferences and declining discount rates 148–9
Future We Want, The (United Nations) 554–5, 555–7
G77 (Group of 77) 433
Gabriel, Y. 285
Gallagher, K.P. 406
Galor, O. 493
Gandhi, Indira 434
Gardiner, S. 117
GDP and economic welfare 349–50, 359–60

Giles Atkinson, Simon Dietz, Eric Neumayer and Matthew Agarwala - 9781782544708
Downloaded from Elgar Online at 02/01/2019 10:56:20PM via free access
Geels, F. 309, 310
GEF (Global Environment Facility) 450, 452–3
Gelb, A.H. 268, 275
Gelobter, M. 195
genetically modified crops 525–7
Genuine Progress Indicator (GPI) 62, 350–57
calculation 350–57
criticisms of 360–67
genuine savings 336–46, 363
definition 337–8
genuine savings indicator (World Bank) 62
GHG, see greenhouse gas emissions
Gierlinger, J. 147, 148
Gilbert, R. 551
Gilmont, M. 507
Glaeser, E.L. 273
Gleick, P.H. 504, 506
Global Environment Facility (GEF) 450, 452–3
Global Footprint Network 372, 375, 379, 382,
385, 387
globalization
and local sustainability 560
and vulnerability 208–10
GM crops and agricultural sustainability 525–7
Gollier, C. 146–7, 148
Gomes, A. 422
Gordon, R.J. 145
Gould, K. 195
governance
of business 566–8
and wellbeing 224, 230
GPI, see Genuine Progress Indicator
Graham, E. 271
Grazi, F. 386
Great Barrier Reef 330
green accounting 185
Green Book (HM Treasury) 150
Green Climate Fund 453–4
Green Economy Initiative (UNEP) 237, 440
green finance 457–8
green fiscal stimulus 244–5
green growth 237–48
definitions 238
Green Growth Knowledge Platform (World
Bank) 237
green jobs 245–6
green paradox 244
green water 502
Greenhalgh, S. 295
greenhouse gas emissions 240
decomposition 261–3
reduction pathways 476–94
supermarket strategies 568–72
Groom, B. 146
Grossman, G.M. 255, 402, 406
growth, see economic growth
Guha, R. 194
Guidelines for Preparing Economic Analyses
(US EPA) 150
Guiso, L. 473
Guivarch, C. 241
Guy, S. 560
Haberl, H. 381
Halicioglu, F. 260
Hamilton, C. 261
Hamilton, K. 25, 28, 35, 36, 39, 337, 338, 339,
340, 342, 343, 399, 408, 409
Hammond equity (HE) axiom 129
Hammond equity for the future (HEF) axiom
134–5
Hanley, N. 260
happiness approach to wellbeing 219
Happiness: Lessons from a New Science
(Layard) 218
Harbaugh, B. 257, 258–9
Hardin, G. 50
Harrod, R.F. 144
Hartwick, J.M. 28, 36, 38–9, 339, 342, 343,
346, 404, 405
Hartwick rule 59, 338, 342–4, 404–5
Harvey, C.M. 145
Hausmann, R. 244
HDI (Human Development Index) 377
Heal, G. 144, 145, 175, 177, 185, 342
Hecht, J.E. 409–10
Hecksher–Ohlin model 401–3
Hecksher–Ohlin Theorem 402
Hediger, W. 529
Helfand, G. 185
Helm, D. 545
Hempel, L.C. 193
Hepburn, C. 146, 151
Heras, H.E. 87, 90
Hewitt, Patricia 282
Hicks, J. 368
hierarchy of needs (Maslow) 222
hierarchy theory 115–16
Hobbs, H. 561
Hochman, E. 180
Hoel, M. 148
Holdren, J. 297, 304
Holling, C.S. 41, 92, 122, 298
Holling sustainability 44
Horan, R.D. 168
Horton, Tom 113
Hotelling Rule 405
Hourcade, J.-C. 175
household level impact of environmental
policy 178–80
Howard, Michael 239
Howitt, P. 257
Hubin, D.C. 162
Hueting, R. 56
Hughes, T. 304–5
Hulme, M. 95
human carrying capacity of the Earth 294
Human Development Index (UNDP) 377
Human Health and Welfare functions 67
human-induced climate change as market
failure 240–42
human-made capital as substitute for natural
capital 361–2, 365
human right to water 502–3
human well-being, see well-being
Hume, David 109, 112
Hume’s law 109
Hurricane Katrina 465–6
hydro-energy, developing countries 538
hyperbolic discount functions 148–9
IAMs (integrated assessment models) and
climate change mitigation 483–92
IEAW (Index of Economic Aspects of
Welfare) 350
immediate productivity condition 127
Inclusive Green Growth: The Pathway to
Sustainable Development (World Bank)
237
Inclusive Wealth Report (UNU-IHDP and
UNEP) 25
income and welfare 26
Index of Economic Aspects of Welfare
(IEAW) 350
Index of Sustainable Economic Welfare
(ISEW) 61–2, 350, 357–8; see also
Genuine Progress Indicator
India, wellbeing and sustainability 225–9
indicators of environmental sustainability
61–3
indicators for sustainable development 47–8
infrastructural services and GPI calculation
354
injunctive norms 286
innovation, technological 241, 304–14
sustainable innovation policy 311–12
innovation systems 305
institutional and technological systems,
coevolution 307–9
institutional lock-in 306–7
institutions
mediating population impact on
environment 298–9
resilience 96
intangible capital 31, 35–6

integrated assessment models (IAMs) and
climate change mitigation 483–92
intergenerational equity 125–38, 175, 177–8
and declining discount rates 149–50
Intergovernmental Panel on Climate Change
(IPCC) 463, 465, 466
international environmental cooperation
418–28
international politics of sustainable
development 432–42
International Telecommunication Union 435
international trade, see trade
intragenerational equity 178–82
Introducing Just Sustainabilities: Policy,
Planning and Practice (Agymean) 201
Inuvialuit people, resource management 98
IPAT identity 297–8, 304
IPCC (Intergovernmental Panel on Climate
Change) 463, 465, 466
ISEW (Index of Sustainable Economic
Welfare) 61–2, 350, 357–8; see also
Genuine Progress Indicator
Israel, water decoupling 508–9
Jackson, T. 239
Jacobs, M. 196
Jalil, A. 259
Jamali, D. 565
James, C. 525
Jamieson, D. 123
Jevons Paradox 506
Johannesburg Conference, see World Summit
on Sustainable Development (WSSD)
Johansson, P.O. 178
John, A. 257
Johnstone, N. 176
JSP (Just Sustainability Paradigm) 194–200
just sustainability 193–200
Kahneman, Daniel 218
Kamien, M.I. 90
Kaspenson, J.X. 298
Kates, R.W. 465–6
Kaufmann, R.K. 259
Kellenberg, D.K. 407, 410
Kemp, R. 309, 310
Kennedy, G. 218
Keynes, J.M. 293
Kijima, M. 406
Kimball, M.S. 147
Kitzes, J. 46
Klepper, G. 408
Knickel, K. 529
knowledge incentives and green growth 242–3
Koopmans, T.C. 144
Kopp, R.J. 152, 153
Kothari, S. 194
Krasner, Steven 444
Kriström, B. 177, 178, 182, 185
Krueger, A.B. 255, 402, 406
Krueger, A.O. 275
Kumar, P. 60
Kuznets, Simon 349
Kyoto Protocol 455
Kysar, D.A. 162

LA21 (Local Agenda 21) 553
labor market, impact of green growth 246–7
Lal, D. 273, 275
land accounts, Australia 329–31
land resources, international comparisons 33
landscapes 310
valuation 65
Law of the Sea, Third UN Conference on the
Lawn, P. 356–7, 360, 362
layard, Richard 218, 219
LCS (Low-Carbon Society) pathways 494
Leamer, E.E. 402
learning effects and increasing returns 306
Lecomber, R. 253
Lee, H. 409
Lee, J.W. 35
Leonard, G.K. 183
Leopold, Aldo 108, 116, 120–21, 122
Lerch, A. 167
Levin, S. 96
Levitt, T. 565
leximin SWR 129
Li, C.Z. 149
life-expectancy and GPI 366
life-style changes and climate change
mitigation 493–4
Life-Support functions, sustainability
standards 67
limits to growth 252–3

Limits to Growth, The (Meadows et al.) 253, 293
Lin, C.-Y.C. 506
Lind, R.C. 141–2
Lindgren, K. 152
Littlechild, S.C. 543
livelihoods and well-being 210–12

Living Planet Reports (Worldwide Fund for
Nature) 375
Local Agenda 21 (LA21) 553
local sustainability 551–62
limits 558–62
Löfgren, K.-G. 149, 177–8
London
ecological footprint 559
sustainability policies 557
Löschel, A. 182
Low, N. 557
Low-Carbon Society (LCS) pathways 494
Lozano, R. 565
Lucas, R.E. 473
Luderer, G. 485
Luers, A.L. 214
M-SGAP 68
Macbean, A.I. 270
macroeconomic indicators of sustainable
development 331–3
Mahmud, S.F. 259
Mäler, K.-G. 177, 337, 338, 340
Malone, E. 465
Malthus, T.R. 517
Managi, S. 406
Marchiori, C. 426
Margolis, M. 165
marine ecosystem valuation 77
Markandya, A. 181
market efficiency and government activities
161
market failures and green growth 240–42
markets, impact of environmental policy 181–2
Marshall, N. 97
Martinez-Alier, J. 194, 408, 411
Marvin, S. 560
Maslow’s hierarchy of needs 222
Massachusetts, environmental justice policy
191–2
Max-Neef, M. 358
maximin 129
May, R.M. 172
McCollum, D. 490
McFadden, D. 183
McGregor, J.A. 220
McGuire, M.C. 175
McNeely, J.A. 524
Meadows, D.H. 253, 293
Meadows, D.L. 253, 293
Measure of Economic Welfare (MEW) 350, 357
measurement
of environmental sustainability 61–3
of sustainable development 47–8
Index 585

of sustainable economic welfare 348–67
of well-being 26
media influence on corporate behaviour 572
Melenberg, B. 260
Mendelsohn, R. 74
MEW (Measure of Economic Welfare) 350, 357
Meyerson, F. 298
Michel, P. 127
Middleton, N. 193
migration and vulnerability 209
Mill, J.S. 292
Millennium Development Goals 210, 444
Millennium Ecosystem Assessment 297, 329
Miller, D. 285
Möller, A. 147, 493
minimum participation rule 422–3
mining and the resource curse 270–71
Mitra, A. 554
Mitra, T. 126, 127
Moffatt, I. 381
Moldovanu, B. 421
monetary accounts 331
monetary SGAP 68
monetary valuation of environmental functions 63–4
Montero, J.P. 544
Moore’s law 314
Morello-Frosch, R. 196
Moretti, E. 473
Morris, William 280
MRIO (Multi-Regional Input–Output) models 387–8, 408–9
Multi-Regional Input–Output (MRIO) models 387–8, 408–9
Muradian, R. 411
Naevdal, E. 165
Najam, A. 432
Namibia, asset accounts 323–4
National Footprint Accounts 375, 388
data sources 394–6
natural capital 30–31, 72, 322–4
international comparisons 31–3
natural resources, see resources
naturalism 109–12
Neal, S. 190
Neary, J.P. 269, 270
needs 222–3
Nelson, R. 305
net national product (NNP) 480, 482–3
Net Primary Productivity (NPP) 381
Netherlands, transition management in energy policy 310–11
network effects and increasing returns 306
Neumayer, E. 58, 61, 154, 342, 366, 507
New Environmental Paradigm (NEP) 194
New International Economic Order (NIEO) 435
new localism 560
New York City, risk management 468–72
Newbery, D.M. 533, 543
Newell, R. 146
niches, innovations 309, 310
NIEO (New International Economic Order) 435
NNP (net national product) 480, 482–3
no dictatorship of the present (NDP) axiom 133
non-cooperative coalition theory 420–21
non-marginal cost–benefit analysis and social discounting 151
Nordhaus, T. 195
Nordhaus, W. 148, 349–50, 357, 366, 367
North, D. 273, 307
NPP (Net Primary Productivity) 381
nuclear energy
China 541
and Ecological Footprints 385
Nunns, J.R. 180
Nussbaum, M. 218
Nutzinger, H.G. 167
O’Keefe, P. 193
O’Neill, B.C. 298
OECD, definition of green growth 238
OECD countries, energy policy 542–6
offsets, environmental 454–5
oil reserves 533
Okumura, R. 410
Oleson, K.L.L. 408
Olmstead, S. 74
Olsson, P. 98
one-child policy, China 295
opportunity cost method of estimating natural capital 30
organic versus non-organic agriculture 521–3
Ostrom, E. 50
Our Common Future (Brundtland Report) 1, 221–2, 238, 253, 436, 532, 551
definition of sustainable development 2, 192
Page, T. 152, 153–4
Parajuli, P. 194
Parfit, D. 144
partial translation scale invariance (PTSI) axiom 128
payments for ecosystem services (PES) 456
Pearce, D. 25, 26, 27, 45, 149, 151, 177, 337, 338, 440
Giles Atkinson, Simon Dietz, Eric Neumayer and Matthew Agarwala - 9781782544708
Downloaded from Elgar Online at 02/01/2019 10:56:20PM
via free access
Pearsall, H. 200
Pearson, L. 65
Pearson, P.J.G. 243
Pecchenino, R. 257
PEDA (Population–Environment–Development–Agriculture) model 294
Pedersen, O. 67
Peirce, C.S. 110
Pere, C. 243
Peman, R. 258
Perotti, R. 176
Perpetual Inventory Method (PIM) 29–30
Perrings, C. 44
Perry, M. 421
Persson, U.M. 148
PES (payments for ecosystem services) 456
pessimism and declining discount rates 145–6
Pezzey, J. 25, 43, 339
Pfeiffer, L. 506
physical I–O tables (PIOT) 67
Pickett, K. 196
Pierce, J. 200
Pierson, P. 307, 308
Pigou, A.C. 57, 128, 144
Pillarsetti, J. 66
Pimentel, D. 294, 523
Pindyck, R. 482, 484
Pizer, W. 146, 545
Polasky, S. 74, 76–7
Polese, M. 193
policies
and Ecological Footprints 376
implication of comprehensive wealth accounting 37
and resource curse 273–5
sustainability policy 48–50
sustainable consumption 286–7
see also energy efficiency policies; energy policies; environmental policies
political freedom and GPI 366–7
political institutions and technological lock-in 307
pollution
evaluating impacts 65
measurement and Ecological Footprints 383
pollution costs and GPI calculation 356
pollution haven hypothesis (PHH) 406
Popp, D. 241
population 291–301
ageing and decline 300
and climate change 493–4
and economic growth 292–4
growth 291–2
optimal trajectories 294–6
and resources 292–4, 296–8
Population–Environment–Development–Agriculture (PEDA) model 294
Porritt, J. 473
Portney, K. 554
Portney, P.R. 152, 153
positive psychology 219
potentially internally stable (PIS) coalitions 425
Potter, J.M. 179–80
precaution 164–9
Precautionary Principle 65
prescriptive approach to social discounting 142–3
Present Value method of estimating natural capital 30
Preston, S.H. 297–8
Pretty, J. 519, 523
price
energy prices and consumption 536
price of time and the resource curse 405–6
Principles of Political Economy (Mill) 292–3
Prisoner’s Dilemma and international environmental cooperation 419–20
private finance for sustainable development 454–8
private-sector consumption and GPI calculation 351–2
produced capital, estimation 29–30
Proops, J.L.R. 408
public consciousness, transforming 113–14
public finance for sustainable development 450–54
public-sector consumption and GPI calculation 354
Pulido, L. 189
Quaas, M. 42
Ramsey, F.P. 128, 144
Randall, A. 161, 165, 168–9
rank-discounted utilitarian (RDU) SWO 136
rapid climate change 95
Ravetz, J.R. 112
Rawls, J. 129, 131, 144
Ray, D. 421
Ready, R.C. 165
recreation as ecosystem service 74–5
Reed, W.I. 87, 90
Rees, W. 46
regional sustainability 46
regulation, impact on firms 180
rehabilitative expenditures and GPI calculation 355
renewable energy incentives
China 541–2
developing economies 539–40
EU 546
US 545–6
rent curse 271–2
Reny, P. 421
resilience 44, 91–100
resource curse 267–76
endogenous explanations 271–5
exogenous explanations 269–71
resources
depletion 65
and economic growth 292–4
and population growth 296–8
resource consumption vs. economic consumption 283–5
resource dependency 96–7
resource economics in open economies 404–6
Ricardo, D. 400, 517
Richmond, A.K. 259
Rio Declaration on Environment and Development 436, 437
Rio Summit (UN Conference on Environment and Development) 436–7, 551, 554
Rio+20 (UN Conference on Sustainable Development) 280, 377, 439–40, 441, 554
Rip, A. 309
risk and uncertainty and declining discount rates 146–8
risk management approach to climate change adaptation 463–73
New York City 468–72
Rittel, H.W.J. 115
Robinson, J. 273
Rockström, J. 63
Rodrik, D. 244
Roe, G.H. 468
Rogers, D.L. 185
Rojas, M. 457
Roland-Holst, D. 409
Rose, A. 178
Rose, A.K. 406
Rotmans, J. 310
Round Table on Sustainable Consumption (UK) 279
Rozelle, S. 473
Rubio, M. del M. 407
Ruta, G. 39, 339, 340
Rutz, S. 422
Ryan, Richard 219
Rybczynski Theorem 402
Sachs, J.D. 268–9, 270, 273–5
Safe and Just Operating Space for Humanity: Can We Live Within the Doughnut? (Raworth) 201
safe minimum standard of conservation 49, 63, 164–6
and precaution 167–9
safe operating space for humanity 63
Sagoff, Mark 109, 110
Sala-i-Martin, X. 473
SAM (social accounting matrix) 183–5
Samuelson, P. 26, 177
Satterthwaite, D. 557
savings gap 345
scale economies 305–6
scaling and environmental problem formulation 115–19
Scarborough, H. 176
Schaefer, F. 387
Schellnhuber, O. 273
Schulz, C.E. 410
Schwartz, N.L. 90
SDGs (Sustainable Development Goals) 440, 481
SEEA (System of Environmental and Economic Accounting) 319–21, 336
Central Framework (CF) 319–21, 333
Experimental Ecosystem Accounting 320, 329, 333
Sefton, J.A. 408
Segerson, K. 74, 76–7
Seidmann, D. 422
Selden, T.M. 257
Self Determination Theory 219
Seligman, M.E.P. 219
Selten, R. 421
Sen, A. 122, 154, 210, 218, 222–3, 224
separable future (SEF) 130
separable present (SEP) 129
Serageldin, I. 55
Serret, Y. 176
Shabana, K.M. 565
Shafik, N. 255
Shellenberger, M. 195
Shimamoto, M. 410
Simon, J. 293, 296
Simon, S. 66
Siniscalco, D. 420, 423, 424
Sjögren, T. 241
smart growth movement, USA 557
Smith, Adam 38, 39, 218, 458
Smith, Kerry 185–6
Giles Atkinson, Simon Dietz, Eric Neumayer and Matthew Agarwala - 9781782544708
Downloaded from Elgar Online at 02/01/2019 10:56:20PM via free access
Handbook of sustainable development

Smith, M. 559
Smith, S. 180
Smith, V.K. 182
SMS (safe minimum standard of conservation) 49, 63, 164–6 and precaution 167–9
Smulders, S. 242
SNA (System of National Accounts) 319, 336
social accounting matrix (SAM) 183–5
social costs and GPI calculation 355
social differentiation and vulnerability 208
social discounting 140, 141–55
alternatives 152–4
decaying discount rates 145–50
international comparisons 150
limitations 151–2
zero discounting 144–5
social-ecological systems 91–2
social norms and consumer behaviour 285–6
social resilience 95–7
Social Responsibilities of the Businessman (Bowen) 565
social sustainability 56
social welfare orders (SWO) 126
social welfare relations (SWR) 126
social wellbeing 220–21
and sustainable development 221–5
socio-technological regimes 309
Sokoloff, K.L. 271
Solomon, B.D. 172
Solow, R. 129, 131, 144, 223
Solow–Hartwick sustainability 44
Song, D. 257
Song, J. 295
Sorrell, S. 546
Soul of Environmentalism, The (Gelobter et al.) 195
Source and Sink functions 67
Soytas, U. 260
Spash, C.L. 65
spatial sustainability 45–7
spending and green growth 245
Spirit Level, The: Why Equality is Better for Everyone (Wilkinson and Pickett) 196
Stähler, F. 408
Stahmer, C. 67
Stankiewicz, R. 305
state valuation function 177
stationarity (ST) 130
Steer, A. 55
Stern, D.I. 257, 258, 262–3
Stern, N. 141, 144, 238–9, 245, 484–5
Stern Review on the Economics of Climate Change 6, 140, 143, 239, 532, 571
Sterner, T. 148
Stiglitz, J.E. 175, 386
STIRPAT equation 298
Stockholm Declaration 434
Stokey, N. 257
Stolper–Samuelson Theorem 402
strategic niche management 310
Stren, R. 193
Strong, Maurice 432, 443
Strong Anonymity (SA) axiom 126
Strong Pareto (SP) axiom 126–8
strong sustainability 43–5, 58–61, 254, 338
and climate change mitigation 478, 480–82, 485–7
and international trade 407–8
subsidies, fossil fuels 536
substitutability
of natural capital, and discount rates 148
of water 504–7
supermarkets, response to climate change 568–72
sustainability 192–200
and environmental justice 188–201
local 551–62
and population 291–301
and resilience 97–100
schematic definition 117–19
and technical innovation 304
and wellbeing 217–31
sustainability gap (SGAP) 65–6, 67–8
sustainability policy 48–50
sustainable agriculture 517–29
Sustainable Communities and the Challenge of Environmental Justice (Agyeman) 188, 201
sustainable consumption 279–88
sustainable development
and climate change mitigation 476–94
definitions 2, 25–6, 192
in ecological economics 41–51
and Ecological Footprints 376–9
and economic growth 253–5
financing 446–58
indicators and models 47–8
international politics of 432–42
and international trade 399–413
macroeconomic indicators 331–3
origins of 433–4
of water resources 500–514
Sustainable Development Goals (SDGs) 440, 481
sustainable discounted utilitarianism (SDU) 135, 149–50
sustainable preferences 133–4
Sustainable Technologies Programme (STP), UK 311
sustainable trade 45–7
<table>
<thead>
<tr>
<th>Author</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Svensson, L.-G.</td>
<td>126</td>
</tr>
<tr>
<td>Swanson, T.M.</td>
<td>522</td>
</tr>
<tr>
<td>Swinnen, J.F.M.</td>
<td>473</td>
</tr>
<tr>
<td>System of Environmental and Economic Accounts, see SEEA</td>
<td></td>
</tr>
<tr>
<td>System of National Accounts (SNA)</td>
<td>319, 336</td>
</tr>
<tr>
<td>Taxation</td>
<td></td>
</tr>
<tr>
<td>Emission taxes</td>
<td>327–8</td>
</tr>
<tr>
<td>Energy policy</td>
<td>540, 543</td>
</tr>
<tr>
<td>Taylor, C.R.</td>
<td>163</td>
</tr>
<tr>
<td>Taylor, D.</td>
<td>194, 197</td>
</tr>
<tr>
<td>Taylor, M.S.</td>
<td>257, 402, 406, 413</td>
</tr>
<tr>
<td>Techno-institutional complexes (TICs)</td>
<td>308</td>
</tr>
<tr>
<td>Technological and institutional systems</td>
<td>307–9</td>
</tr>
<tr>
<td>Technological innovation</td>
<td>304–14</td>
</tr>
<tr>
<td>Technological lock-in</td>
<td>305–6</td>
</tr>
<tr>
<td>Technological niches</td>
<td>309, 310</td>
</tr>
<tr>
<td>Technological systems</td>
<td>304–5</td>
</tr>
<tr>
<td>Technological transitions</td>
<td>309–13</td>
</tr>
<tr>
<td>Theory of Moral Sentiments, The (Smith)</td>
<td>218</td>
</tr>
<tr>
<td>Thoreau, Henry</td>
<td>280</td>
</tr>
<tr>
<td>Time-discounted utilitarian (TDU) SWO</td>
<td>131–4</td>
</tr>
<tr>
<td>Tisdell, C.A.</td>
<td>518, 521, 529</td>
</tr>
<tr>
<td>Tobin, J.</td>
<td>349–50, 357, 367</td>
</tr>
<tr>
<td>Tol, R.S.J.</td>
<td>240, 465, 484</td>
</tr>
<tr>
<td>Tompkins, E.L.</td>
<td>99</td>
</tr>
<tr>
<td>Total capital, international comparisons</td>
<td>31–5</td>
</tr>
<tr>
<td>Towards Green Growth (OECD)</td>
<td>237</td>
</tr>
<tr>
<td>‘Toxic wastes and race in the United States’ (United Church of Christ)</td>
<td>189</td>
</tr>
<tr>
<td>Trade</td>
<td></td>
</tr>
<tr>
<td>and Ecological Footprints</td>
<td>383–4</td>
</tr>
<tr>
<td>International trade theory</td>
<td>400–404</td>
</tr>
<tr>
<td>Policy instruments</td>
<td>409–11</td>
</tr>
<tr>
<td>Sustainable</td>
<td>45–7</td>
</tr>
<tr>
<td>and sustainable development</td>
<td>399–413</td>
</tr>
<tr>
<td>Trade liberalization</td>
<td></td>
</tr>
<tr>
<td>Timing and sustainability</td>
<td>403–4</td>
</tr>
<tr>
<td>and vulnerability</td>
<td>208–9</td>
</tr>
<tr>
<td>Traeger, C.P.</td>
<td>147</td>
</tr>
<tr>
<td>Transition pathways</td>
<td>312–13</td>
</tr>
<tr>
<td>Trinidad and Tobago, produced capital</td>
<td>344</td>
</tr>
<tr>
<td>Tsoularis, A.</td>
<td>172</td>
</tr>
<tr>
<td>Turner, K.</td>
<td>260</td>
</tr>
<tr>
<td>Turner, R.K.</td>
<td>59</td>
</tr>
<tr>
<td>Turton, H.</td>
<td>261</td>
</tr>
<tr>
<td>Ultimate Resource, The (Simon)</td>
<td>293, 296</td>
</tr>
<tr>
<td>UNCED (Conference on Environment and Development) Rio, 1992</td>
<td>436–7, 551, 554</td>
</tr>
<tr>
<td>UNCSD (Conference on Sustainable Development, Rio+20)</td>
<td>280, 377, 439–40, 441, 554</td>
</tr>
<tr>
<td>UNDP Human Development Index (HDI)</td>
<td>377</td>
</tr>
<tr>
<td>UNFCCC (Framework Convention on Climate Change)</td>
<td>436</td>
</tr>
<tr>
<td>United Kingdom</td>
<td></td>
</tr>
<tr>
<td>Electricity system</td>
<td>308, 312–13</td>
</tr>
<tr>
<td>ESRC Sustainable Technologies Programme (STP)</td>
<td>311</td>
</tr>
<tr>
<td>Round Table on Sustainable Consumption</td>
<td>279</td>
</tr>
<tr>
<td>Social discount rates</td>
<td>150</td>
</tr>
<tr>
<td>Supermarkets, response to climate change</td>
<td>568–72</td>
</tr>
<tr>
<td>Sustainable Communities Plan</td>
<td>555</td>
</tr>
<tr>
<td>Sustainable consumption strategy</td>
<td>279, 283–4</td>
</tr>
<tr>
<td>United Nations</td>
<td>433</td>
</tr>
<tr>
<td>Conference on Sustainable Development (UNCSD), Rio+20</td>
<td>280, 377, 439–40, 441, 554</td>
</tr>
<tr>
<td>Conference on the Human Environment (UNCHE)</td>
<td>434</td>
</tr>
<tr>
<td>Development Programme (UNDP) Human Development Index</td>
<td>377</td>
</tr>
<tr>
<td>Environment Programme, see UNEP</td>
<td></td>
</tr>
<tr>
<td>Framework Convention on Climate Change (UNFCCC)</td>
<td>436</td>
</tr>
<tr>
<td>Third Law of the Sea Conference</td>
<td>435</td>
</tr>
<tr>
<td>United States</td>
<td></td>
</tr>
<tr>
<td>Acid Rain Program</td>
<td>455</td>
</tr>
<tr>
<td>Endangered Species Act (ESA)</td>
<td>167</td>
</tr>
<tr>
<td>Environmental justice movement</td>
<td>189</td>
</tr>
<tr>
<td>National Research Council, population report</td>
<td>296</td>
</tr>
<tr>
<td>Renewable energy</td>
<td>545–6</td>
</tr>
<tr>
<td>Smart growth movement</td>
<td>557</td>
</tr>
<tr>
<td>Social discount rates</td>
<td>143, 150</td>
</tr>
<tr>
<td>Unruh, G.C.</td>
<td>308</td>
</tr>
<tr>
<td>Unsustainable consumption</td>
<td>285–6</td>
</tr>
<tr>
<td>Urban Ecology</td>
<td>199</td>
</tr>
<tr>
<td>Urban sustainability</td>
<td>551–62</td>
</tr>
<tr>
<td>User cost method</td>
<td>356, 363–4</td>
</tr>
<tr>
<td>Utility function approach (Schelling)</td>
<td>153</td>
</tr>
<tr>
<td>Valuation</td>
<td></td>
</tr>
<tr>
<td>Ecosystem goods and services</td>
<td>74–7</td>
</tr>
<tr>
<td>Environmental functions</td>
<td>63–5</td>
</tr>
</tbody>
</table>
value pluralism 163
values, see ethics
van den Bergh, J.C.J.M. 42, 46, 66, 386
van Kooten, G.C. 172, 386
van Marrewijk, M. 566
van Wijnenbergen, S.N. 269, 270
Vaze, P. 67
Veblen, Thorstein 280
Veenhoven, Ruut 218
Verbruggen, H. 46, 386
very strong sustainability 44
Victor, P.A. 61
Vietnam, adaptive management 98–9
Vincent, J. 343, 405
Vincent, K. 465
virtue ethics 107, 111, 119–21
Vitousek, P.M. 381
Vohra, R. 421
Vollebergh, H.R.J. 257, 258
voting mechanisms as alternative to social
discounting 153–4
vulnerability 206–15
Wackernagel, M. 46
Wada, Y. 503
Wagner, M. 258
Warner, A. 268–9, 273–5
Warner, K. 200
water 500–514
agricultural usage, impact on biodiversity
524
and food supply chains 510–11
as human right 502–3
political economy 507–10
substitutability 504–7
Watts, M.J. 214
weak sustainability 3, 27, 43, 44–5, 58–61, 254,
338
and climate change mitigation 477, 480–82,
484–5
and international trade 408
and welfarism 164
Weale, M.R. 408
wealth accounting 25–38
intangible capital 35–6
international comparisons 31–5
total wealth 28–31
Wealth of Nations, The (Smith) 39, 218
Webber, M.M. 115
WeD (Wellbeing in Developing Countries)
research programme 218
Weder, R. 407
Weiss, J. 244
Weitzman, M. 146, 151–2, 337, 338, 343, 482,
545
Weizsäcker, C.C. von 154
welfare
indicators 482–3
measurement 177, 348–67
welfarism 161–3
and weak sustainability 164
well-being 26, 217–31
and natural capital 38
social wellbeing 220–21
and sustainability, India 225–9
and sustainable development 221–5
Westley, G. 269
White, Lynn 105
wicked problems 115
wild biodiversity and agriculture 523–4
Wilkinson, R. 196
Williams, Bernard 110
windfall revenue and rent curse 271–2
Winter, E. 422
Winters, L.A. 473
Withagen, C. 36, 343, 403
Woodward, R.T. 167
World Bank
genuine savings indicator 62
and green growth 237, 238
World Development Indicators (World Bank)
337, 339–41
World Development Report (World Bank) 239
World Summit on Sustainable Development
2002 (WSSD) 438–9, 554, 555
Plan of Implementation 282
statement by local government 555, 561
World Trade Organization (WTO) 438
WSSD, see World Summit on Sustainable
Development
WTO (World Trade Organization) 15, 410, 438
Yaari, M.E. 127, 145
yields, agricultural
GM crops 525–6
organic versus non-organic agriculture 532
Yohe, G. 465
Zame, W. 126, 127
Zeng, D.-Z. 407
zero discounting 144–5
Zhang, Z.X. 541
Zhao, L. 407
Zilberman, D. 180
Zimmerman, K. 183
Zolotas, X. 350