Academy of Nutrition and Dietetics 183
Alberti, Leon Battista 391
Amazon.com, Inc.
   Mechanical Turk system 443
American Bar Association
   Model Procurement Code 355
American Nurses Association 183
American Planning Association
   Planning and Community Health Research Center 183
American Public Health Association 183
American Public Transportation Association (APTA)
   report of trends in funding for public transportation 137–8
American Society of Civil Engineers (ASCE) 136, 148
   estimation of spending trends 137–8
   infrastructure ratings 139
American Water Works Association 138
AmeriCorps
   staff of 197
Apollo Alliance 367
Australia 22–3, 25, 100, 196, 200–201, 410
   Melbourne 19
   Sydney 16, 19
Austria
   Vienna 24, 261
Bangladesh
   Dhaka 16
Behaviour, Energy, and Climate Conference 204
Belgium
   Brussels 276
Bilan Carbon 257
Böge, Stephanie 439
Boston Foundation, Inc. 295
   Wisdom of Our Choices: Boston’s Indicators of Progress, Change, Sustainability, The 287
Brookings Institution 22, 144
Brown, Jerry
   lawsuit against San Bernardino County 130
Brundtland, Harlen 4
Brundtland Commission 3–4, 296
Bureau of Economic Analysis 136
Cal-EnviroScreen 242
Cal State San Bernardino 129
California Air Pollution Control Officers’ Association (CAPCOA)
Campbell, Scott 388
Canada 27, 58, 77, 417
   Ontario 161
   Toronto 80, 269, 277
   Vancouver 16, 69, 267
carbon credit savings 52
Carpenter, Novella
   ‘Ghost Town Farm’ 79
Center for Disease Control and Prevention (CDC)
   Communities Putting Prevention to Work (CPPW) Initiative 79
Healthy Community Design Initiative 182–3
Central Arizona-Phoenix Long-Term Ecological Research Project (CAP-LTER) 276
Chevron 164
China 6
Hong Kong 16, 277
Shenzhen 16
city indicators of sustainability 283–301
challenges 298–9
early projects 283–4
indicator categories 291–7
air quality 293–4
economic indicators 296–7
energy 295
environment 293
social indicators 295–6
solid waste management and recycling 294–5
water quality 294
indicator projects 284–99
Austin, TX 287–8, 291, 293, 297, 299
Boston, MA 285, 287, 292, 295–9
Jacksonville, FL 286–7, 299
Minneapolis, MN 284–5, 287–99
Santa Monica, CA 285, 288, 291–2, 294, 296–7, 299
Sustainable Seattle 284, 286–7, 290, 292–8
intersecting indicators 297–8
purposes 284
CivicEvolution 201
Clean Energy Works
aims of 128
Clean Water State Revolving Fund
funding provided by 149
Climate Access
Climate Communication and Behaviour Change 204
climate action planning (mitigation) 302–19
definition of 302
goals of 303
implementation and monitoring 315–17
number of cities within 302
plan development 309–15
preliminary activities 305–9
resources 317–19
steps in process 303–5
climate action plans (CAPs) 302–3, 315
adoption of 305–7
climate action team (CAT) 304–5, 307
climate adaptation strategies 313–14
community 305
GHG inventory 307, 310–11
public participation 308
updating of 317
climate adaptation planning 320–335
climate impacts 321–3
definition of 320
implementation 333
strategy development 330–2
decision matrix 330–1
prioritizing strategies 332–3
vulnerability assessment 325–30
adaptive capacity 329–30
exposure 325–7
Cal-Adapt (PIER) tool 327
NOAA sea-level rise viewer 327
Sensitivity 327–30
climate change 32, 190, 338, 344–5, 351, 415
change in precipitation 36–7
extreme events 37–8, 322–3
impact on ecosystem 322–3
impact on municipal water services 33
impact on public health 322
impact on urban water services 32, 38–9
increased ambient temperature 33–5, 321
sea-level rise 35–6, 322
Clinton, Bill
Executive Order #12898 228–9, 234
Club of Rome 162
cluster initiatives
concept of 122
technology transfer facilitated by 123
Coleman, James
‘Social capital in the creation of human capital’ 421–2
compact cities 28–9
automobile cities 16–17
densities to facilitate walking and transit 17–22
density 15–16
energy use of transport 17–20
Marchetti Constant 24–5
peak care use 22–4
<table>
<thead>
<tr>
<th>Index</th>
<th>471</th>
</tr>
</thead>
<tbody>
<tr>
<td>causes of 24–8</td>
<td>Baltimore’s Energy Challenge (BEC) 196–7</td>
</tr>
<tr>
<td>role of transport 15–17</td>
<td>Chicago’s City-Community Partnerships 199–200</td>
</tr>
<tr>
<td>transit cities 16</td>
<td>Denver’s Clean Air at Schools: Engines Off! (CASEO) 195</td>
</tr>
<tr>
<td>urban form, history of 15–17</td>
<td>EcoTeam programs 197–9</td>
</tr>
<tr>
<td>walking cities 16</td>
<td>Geraldton 2029 and Beyond, Western Australia 200–2</td>
</tr>
<tr>
<td>compact fluorescent lamps (CFLs) 197</td>
<td>Toronto’s Turn It Off program 194–5</td>
</tr>
<tr>
<td>computable general equilibrium analysis (CGE)</td>
<td>guides for engagement 188–9</td>
</tr>
<tr>
<td>concept of 348</td>
<td>strategies for engagement 189–92</td>
</tr>
<tr>
<td>Congrès Internationaux d’Architecture Moderne (CIAM)</td>
<td>information provisions and persuasion 189–91, 193–4, 202</td>
</tr>
<tr>
<td>Athens Charter 388</td>
<td>psychology-based tools 191–9</td>
</tr>
<tr>
<td>Consolidated Edison 141</td>
<td>Community Based Social Marketing (CBSM) 194, 196</td>
</tr>
<tr>
<td>East Bay Green Corridor Partnership 122</td>
<td>participatory deliberation 189, 192, 199–202, 205</td>
</tr>
<tr>
<td>economic development 397, 410–11, 420</td>
<td>strengthening engagement strategies 202–5</td>
</tr>
<tr>
<td>economic value of community 410–11</td>
<td>environmental economics 346–7</td>
</tr>
<tr>
<td>green economy and 358–9</td>
<td>concept of 346</td>
</tr>
<tr>
<td>in sustainable development 358</td>
<td>view of resilience 346–7</td>
</tr>
<tr>
<td>procurement policies and 358–9</td>
<td>environmental justice (EJ) 228–52</td>
</tr>
<tr>
<td>strategies 366–7</td>
<td>definitions of 232–3, 235–6</td>
</tr>
<tr>
<td>sustainable 397–401, 409–11</td>
<td>history and issues 228–30</td>
</tr>
<tr>
<td>taxation 401, 409</td>
<td>measurement of 233–41</td>
</tr>
<tr>
<td>economic resilience 336–53</td>
<td>community involvement 239–41</td>
</tr>
<tr>
<td>business interruption (BI) 340</td>
<td>cumulative approach 235–9</td>
</tr>
<tr>
<td>climate change adaptation and 344–6</td>
<td>Environmental Justice Screening Method (EJSM) or CAL-EnviroScreen 237–9, 242</td>
</tr>
<tr>
<td>definition of 339–40</td>
<td>EPA EJSEAT program 242</td>
</tr>
<tr>
<td>direct state economic resilience (DSER) 340–1</td>
<td>local and regional scale 232–5</td>
</tr>
<tr>
<td>ecological economics and 347–9</td>
<td>other environmental health/justice tools 243–4</td>
</tr>
<tr>
<td>environmental economics and 346–7</td>
<td>relation to sustainability 230–2</td>
</tr>
<tr>
<td>options for achieving 342–4</td>
<td>Environmental Justice Advisory Committee (EJAC) recommendations of 241</td>
</tr>
<tr>
<td>quantification of 340–2</td>
<td>Environmental Protection Agency (EPA) 98, 138, 143–5, 240–2, 293, 316–17, 362</td>
</tr>
<tr>
<td>sustainability and 338–9, 348–9</td>
<td>drinking water criteria 38</td>
</tr>
<tr>
<td>total static economic resilience (TSER) 341</td>
<td>EGrid Model 96</td>
</tr>
<tr>
<td>urban vulnerability and resilience 336–8</td>
<td>Energy Star 313</td>
</tr>
</tbody>
</table>
Environmental Justice Strategic Enforcement Assessment Tool (EJSEAT) 242
Environmentally Preferable Purchasing (EPP) 361
funding provided by 316
Pollutant Standards Index 293
European Union (EU) 51
TRUST project 267
Fair Food Network 73
Field Museum, The 199–200
Finland 426
First World War (1914–18) 359–60
fiscal sustainability 154–65
- connecting fiscal and environmental decision-making 157–8
- connecting land use, housing, transportation and air quality
California’s Cap and Trade program (case) 159
Southern California Association of Governments (case) 158–9
environmental sustainability 154–5
Alameda Corridor, Los Angeles County (case) 154
linking long-range planning and budgeting
City and County of San Bernardino (case) 160–2
political strategy for 162–4
- shifting from short-term to long-term fiscal planning 156–7
- urban budgeting 155–6
Florida, Richard 15
Food Action Plan 75–6
- recommendations of 76–7
Food and Agriculture Organization (FAO)
definition of sustainable diets 60
Food Retail Expansion to Support Health (FRESH) 72
food supply chain/system 71, 79–80
mobile food vending 71
regional 66–7
relationship with urban environment 63–4
waste reduction strategies 74–5, 80
Food Trust, the Pennsylvania Fresh Food Financing Initiative 72
Forester, John
Deliberative Practitioner, The 216
France
Agency for the Environment and Energy Management 257
Nantes 267, 269
fuel prices 19
rise of 28
Futerra
Engage: Campaign Guidebook for Cities 204
Garrison Institute 189, 204
Geddes, Patrick 384
Germany 161–2, 417
Freiburg 162
Hamburg 261
Leipzig 261
Giuliani, Rudy 68
Global Cities Database 15, 17–18
- expansion of 23
Global Financial Crisis (2007–9) 28
impact on urban food systems strategies 59–60
globalization 58, 371, 400, 411
economic 6
of agriculture 402
Good Food Purchasing Pledge
good food criteria 65–6
governance of sustainable cities in future 413–33
as fourth system 414–15
city-level 423–4
corporatist 417
definition of governance 416
deliberative and inclusionary processes and procedures (DIPs) model 419–20, 429
governance and sustainability in American cities 418–23
impact of economic failure on 422–3
information-deficit (ID) model 419
legitimate 415, 426
neo-corporatist 417–18
networked 75
new governance capacities for local sustainability 426–31
relation of governance to environmental performance 416–18
research needs 423–6
role of governance in sustainability transition 413–14
Great Depression 360
Green Action Plan 129
green business and industry 116–32
case studies of green businesses
energy efficiency retrofits in Portland, Oregon 127–8
Green Action Plan of Riversdale, California 127–30
evidence of green business and industry 125–7
green economy, definition of 117
green economy and economic development 117–20
growth vs. development goals 120–3
strategies for greening local economies 123–5
Green Business Certification Program 368
Green Developer Agreement (GDA) 70
green economy 116–17, 125, 365
concept of 117
consumption 119–20
development of 118–19, 121, 124–7, 130–1, 365
production 119
regulation and standards in 123–4
use of business incentives in 121–2, 125–6
Green Valley Initiative (GVI) aims of 129–30
Greenest City 2020 Action Plan 69
carbon dioxide (CO2) 159, 194–5, 265, 268, 270
contribution of infrastructure to 145
inventory 307, 310–11
life-cycle 67, 257
national 51
sources of 50

Hayes Valley Farm 70
Haynes Foundation 154
healthy cities 166–87
density and health 167, 172
extreme weather events and health 170, 172
health, definitions of 166–8
Healthy Cities Initiative (WHO) 183
nutrition and access to healthy food 170–1
organizations promoting healthy communities 182–4
physical activity and built environment 169
social capital and public places 171
sustainability and human health 166
tools for measuring health in cities 178–82
Health Impact Assessment (HIA) 180–2
City of Baltimore’s HIA (case) 181–2
LEED certification 178–80
WalkScore 179–80
urban heat island effect 176–7
urban planning and public health 167, 169–78
building scale
city scale
neighbourhood scale
region scale
Healthy Food Financing Initiative 72
human capital 421, 428
worker 122
human social organizations 4

ICLEI – Local Governments for Sustainability 60, 188, 204, 305, 314, 317
5 Milestone Process 303–4
India
Mumbai 16
Indonesia
Jakarta 16
Industrial Control Systems Cyber Emergency Response Team 143
Industrial Revolution 399
infrastructure facilities, definition of 136
Inland Empire 130
development of 128–9
Inland Empire Economic Partnership 129
Institute of Medicine 167
Intergovernmental Panel on Climate Change (IPCC) 147
International Business Machines Corporation (IBM) Smarter Buildings 436
Israel Haifa 393
International City Management Association 285
Italy Turin 267
Jabareen, Yosef Rafeq 393
Japan Kobe Earthquake (1995) 343
Tokyo 16
Jonathan Rose Companies 70
Jordan Amman 277
landfill disposal EPA regulation of 98
life-cycle assessment (LCA) 91, 102, 111, 266, 270, 436–7
concept of 90
environmental 268
life-cycle inventory (LCI) 90–1
social 91
spatially explicit 91
local human development 119
location theory concept of 125
Loveridge, Ron Mayor of Riverside 129
Mackaye, Benton 384
Marchetti, Cesare 15
Marsh, George Perkins 391
Menomonee Valley project 420–1
metropolitan planning organizations (MPOs) 245
Mexico Michoacán 200
Mostafavi, Mohsen 392
Mumford, Lewis 384, 391
National Academy of Public Administration 162
National Academy of Sciences Sustainability at EPA 424
National Aeronautics and Space Administration (NASA) 162
National Air Toxics Assessment 232
National Association for the Advancement of Colored Peoples (NAACP) 228
National Association of State Procurement Officials (NASPO) 354, 370, 373
National Audubon’s Society Tools of Engagement 204
National Bridge Inventory 139
National Center for Environmental Health Division of Emergency and Environmental Services 182
National Science Foundation Climate and Urban Partnership 205
National Transportation Safety Board 139
New Zealand 17
non-governmental organizations (NGOs) 59, 65, 69–70
North American Association for Environmental Education Guidelines of Excellence (series) 204
Norway 426
Oslo 266–7, 269
Obama, Barack administration of 134, 141
Olmsted, Frederick Law 384, 391
O’Neil, Tip US Speaker of the House 155
Organization for Economic Co-operation and Development (OECD) Guidance on Sustainability Impact Assessment 424
participatory processes 210–27
Community Benefits Agreements (CBAs) 221, 224–6
Los Angeles’ Staples Center district (case study) 222
community partnerships 218, 223
Oregon Solutions (case study) 218–19
Diversity, Interdependency, Authentic Dialogue (DIAD) 214–15
elements of 214–18
methods 212–13
participatory planning 219, 223–4
East Portland Action Plan (case study) 219–21
Public Outreach and Engagement Liaisons (POELs) 216
social capital 217
Pedestrian Environmental Quality Index (PEQI) 180
Penn Future 122
Pew Research Center for the People and the Press 133
survey (2014) 134
Poland
Kraców 16
Portland Business Alliance 128
Portland State University National Policy Consensus Center 218
Portugal
Lisbon 261
procurement policies 354–77
buy local approaches 358–9
Business Alliance for Local Living Economies (BALLE) 359
concept of 354
economic development and 358–9
environmental benefits 360–2
equity and social justice and 359–60
intergovernmental coordination 370–2
policy development 366–9
policy implementation 369–70
product identification 364–6
sustainability values and 356–7
systems-based sustainable 362–4
values and goals of 355–6
Property Accessed Clean Energy (PACE) 367
Putnam, Robert 428
definition of social capital 421
Rawls, John 388, 393
Justice as Fairness 393–4
Recipe for Healthy Places, A (2012) provisions of 78–9
Recyclebank rewards program of 99
Recycling Market Development Zones concept of 121
Reinvestment Fund 62
Republic of Ireland
Limerick 261
return on investment (ROI) 159
Richmond Build 123
Safe Routes to School aims of 183–4
Second World War (1939–45) 360
Sightline Institute 148
Singapore 16
SNAP 65, 72–3
increased enrolment in 59, 76
Solar Energy Industry Association 127
SolarTech 127
Soleri, Paolo 385
Spain 51–2
Barcelona 16–17
substantive flow analysis (SFA) 272
sustainable economic development in future 397–412
change in economic assumptions 399–400
framework for transition 409–11
levers for a new economy 401–9
agriculture and soil 402
business 406–7
community economic development corporations 404
density and affordability 405
energy 402–4
environment and settlement patterns 404–5
extraction taxes and levies
female and indigenous values 409
glocalization 408
new roles and rules 405–6
taxation 409
technology 408
travel and transport 404
role of local places 398
sustainable foundation of local economic development 397
initiatives 1–2
long-term 178
promotion of via public health 172–3, 180
public involvement 211
relationship with resilience 338–9, 348–9
role of governance in 413–15, 422, 428–30
role of infrastructure in 145
transit access 22
transitions 414, 416, 418–21, 423, 425–6
urban 8, 58, 86, 385, 456, 458, 466–7
Sustainability Community Program proposed development of 158–9
sustainability, definitions of 3–6, 230
Sweden 417, 426
Stockholm 24
Switzerland
Zurich 24
Thailand
Bangkok 259
technology in cities in future 434–48
adoption and cultural acceptance 444–5
health care concerns 444
human-computer interaction (HCI) 438
information technology (IT) as force multiplier 434
local activity 439–41
quantification of 435–7
privacy concerns 443
security concerns 443–4
smart control 437–9
widespread sharing 441–2
transit
growth of public 25–6
triple bottom line (TBL) concept of 4
Twin Cities Household Ecosystem Project (TCHEP) 276
UC Riverside
College of Engineering-Center for Environmental Research Technology (CE-CERT) 129
United Church of Christ (UCC) 228
Commission for Racial Justice 228
United Kingdom (UK) 15, 359, 403
London 16, 24, 261, 398
United Nations (UN) 3, 144, 189
Environment Program (UNEP) 147
Millennium Development Goals (MDGs) 32
World Commission on Environment and Development 166
9/11 Attacks 338, 341–2, 344
Affordable Health Care for America Act 73–4, 79
Air Force (USAF) 162
American Public Transportation Association (APTA) 137–8
American Recovery and Reinvestment Act (ARRA) 137, 367
Ann Arbor 97
Atlanta 17, 24, 125
Austin 122, 234, 283
Bacon-Davis Act (1931) 360
Bureau of Census 273, 285–6, 299
Chicago 69, 71, 80, 147, 337, 402
Clean Air Act 136, 178
Clean Water Act 70
Congress 133, 141
Congressional Budget Office (CBO) 136–7, 149
Council on Economic Advisors 135
Department of Agriculture (USDA) 62, 72–3, 93, 170, 183
Department of Energy 128, 140, 146–7, 273
Department of Health and Human Services 170, 181
Department of Homeland Security (DHS) 142–3
<table>
<thead>
<tr>
<th>Index</th>
<th>477</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Housing and Urban Development (HUD)</td>
<td>141, 242</td>
</tr>
<tr>
<td>Department of Transportation (DOT)</td>
<td>141–3, 148</td>
</tr>
<tr>
<td>Department of Treasury</td>
<td>135, 170</td>
</tr>
<tr>
<td>Detroit</td>
<td>68, 73, 336</td>
</tr>
<tr>
<td>Disaster Relief Appropriations Act (2013)</td>
<td>141</td>
</tr>
<tr>
<td>Federal Emergency Management Agency (FEMA)</td>
<td>140, 142</td>
</tr>
<tr>
<td>Federal Highway Administration (FHWA)</td>
<td>148, 184</td>
</tr>
<tr>
<td>Food, Conservation, and Energy Act (2008)</td>
<td>64</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>137</td>
</tr>
<tr>
<td>General Accounting Office</td>
<td>228</td>
</tr>
<tr>
<td>Government Accountability Office (GAO)</td>
<td>139, 143</td>
</tr>
<tr>
<td>Healthy Hunger-Free Kids Act (2010)</td>
<td>73</td>
</tr>
<tr>
<td>Houston</td>
<td>24</td>
</tr>
<tr>
<td>Hurricane Gustav (2008)</td>
<td>140</td>
</tr>
<tr>
<td>Hurricane Ike (2008)</td>
<td>140</td>
</tr>
<tr>
<td>Hurricane Katrina (2005)</td>
<td>140–1, 144–5, 336, 343, 345, 348</td>
</tr>
<tr>
<td>Hurricane Rita (2005)</td>
<td>140</td>
</tr>
<tr>
<td>Hurricane Sandy (2012)</td>
<td>140–1</td>
</tr>
<tr>
<td>Jacksonville</td>
<td>283–4</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>24, 60, 65, 71, 79–80, 100, 128–9, 163, 176, 398</td>
</tr>
<tr>
<td>Medicaid</td>
<td>298</td>
</tr>
<tr>
<td>Medicare</td>
<td>298</td>
</tr>
<tr>
<td>military of</td>
<td>62</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>69, 74, 80, 272</td>
</tr>
<tr>
<td>MSW of</td>
<td>94, 97–8, 101</td>
</tr>
<tr>
<td>National Environmental Policy Act (NEPA)</td>
<td>135–6</td>
</tr>
<tr>
<td>National School Lunch Program</td>
<td>72</td>
</tr>
<tr>
<td>New Orleans</td>
<td>144, 336, 338, 341, 345, 348</td>
</tr>
<tr>
<td>New York</td>
<td>16, 58–9, 64–71, 73, 7, 80, 93, 125, 141, 144, 147, 167, 198, 236, 341–2, 358–9, 398, 408, 425</td>
</tr>
<tr>
<td>obesity rates in</td>
<td>93</td>
</tr>
<tr>
<td>Omaha</td>
<td>367</td>
</tr>
<tr>
<td>Portland</td>
<td>99–100, 117, 360, 420–1, 423, 429</td>
</tr>
<tr>
<td>public school system of</td>
<td>66</td>
</tr>
<tr>
<td>Public Works Act (1977)</td>
<td>360</td>
</tr>
<tr>
<td>real estate sector of</td>
<td>28</td>
</tr>
<tr>
<td>renewable energy sector of</td>
<td>146–7</td>
</tr>
<tr>
<td>Sacramento</td>
<td>122</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>117, 127–30, 154–5, 163</td>
</tr>
<tr>
<td>San Diego</td>
<td>128, 237, 385</td>
</tr>
<tr>
<td>San Francisco</td>
<td>24, 68, 70, 74, 121–3, 125, 338, 358</td>
</tr>
<tr>
<td>San Jose</td>
<td>360, 362</td>
</tr>
<tr>
<td>Santa Monica</td>
<td>283–4</td>
</tr>
<tr>
<td>Seattle</td>
<td>75–7, 79–80, 216, 234, 283</td>
</tr>
<tr>
<td>Silicon Valley</td>
<td>127, 129, 234</td>
</tr>
<tr>
<td>Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)</td>
<td>72</td>
</tr>
<tr>
<td>Superfund Amendments and Reauthorization Act (SARA)</td>
<td>221–2</td>
</tr>
<tr>
<td>Supplemental Nutrition Assistance Program</td>
<td>72</td>
</tr>
<tr>
<td>Wagner-O'Day Act (1938)</td>
<td>359–60</td>
</tr>
<tr>
<td>Warren County Protests (1982)</td>
<td>228–9</td>
</tr>
<tr>
<td>Washington DC</td>
<td>125</td>
</tr>
<tr>
<td>United Way Caring Index</td>
<td>296</td>
</tr>
<tr>
<td>University of California, Irvine (UCI)</td>
<td>442</td>
</tr>
<tr>
<td>Intel Science &amp; Technology Center for Social Computing</td>
<td>443</td>
</tr>
<tr>
<td>University of Southern California faculty of</td>
<td>385</td>
</tr>
<tr>
<td>urban definition of</td>
<td>6</td>
</tr>
<tr>
<td>urban agriculture</td>
<td>57, 69–70</td>
</tr>
<tr>
<td>expansion of</td>
<td>67</td>
</tr>
<tr>
<td>growing space</td>
<td>68</td>
</tr>
<tr>
<td>potential use of contaminated soil in</td>
<td>68</td>
</tr>
<tr>
<td>Urban Agriculture Policy Plan</td>
<td>69</td>
</tr>
<tr>
<td>urban complexity</td>
<td>8</td>
</tr>
<tr>
<td>urban consumption patterns</td>
<td>86–115</td>
</tr>
<tr>
<td>life cycle of products consumed in cities</td>
<td></td>
</tr>
<tr>
<td>municipal solid waste (MSW) illustration</td>
<td>86–9</td>
</tr>
<tr>
<td>sustainability for urban consumption</td>
<td>91–111</td>
</tr>
<tr>
<td>consumer product design</td>
<td>92</td>
</tr>
<tr>
<td>dematerializing packaging</td>
<td>101–4</td>
</tr>
<tr>
<td>distribution efficiency</td>
<td>105–6</td>
</tr>
</tbody>
</table>
distribution strategies 102, 104–5
energy efficiency/Grid Mix 96–7
local sourcing 105–7
optimal product replacement 95
plastic bag policies 100–1
product sharing 93–4
reducing food consumption 92–3
repair 94–5
urban design 381–96
Ahwanee Principles 388
Alexander, Christopher 383, 391
Appleyard, Donald 383, 386, 388
Aristotelian vs. Platonic approaches 382
Congress for the New Urbanism (CNU) 389–91
Duany, Andres 383, 390
ecological vs. anthropocentric approaches 383
Hester, Randolph 383, 392
integrative framework 393–4
Jacobs, Allan 383, 388
Knowles, Ralph 383, 385
Landscape (Ecological) Urbanism 383, 391–2
Lynch, Kevin 383, 386
matrix of normative theories 383
McHarg, Ian 383–5
New Urbanism 383, 388–91
Peattie, Lisa 382
Soleri, Paolo 383, 385
Spirn, Ann 383, 391–2
Steiner, Frederick 392
Talen, Emily 383, 390, 392
theories and movements 381
Wright, Frank Lloyd 385
urban food systems and plans 57–85
comprehensive plans for food production 69–70, 78–9
drivers of food plans and policy making 58–60
environmental impacts of food production and distribution 63–4
farmers’ markets 64–5
federal food benefits 59, 72–4
food deserts 62
food insecurity 61–3
food residuals 74–5
food system sustainability 60–1, 63–4
governance of food systems 75–8
history of 57
local trap criticism 66–7
obesity and health effects 61–2, 92
school procurement of local food 65–6
strategies for sustainable urban food policy 64–70
urban food distribution and processing
zoning changes for local food production 67–8
urban flooding efforts to prevent 8
urban infrastructure investment 133–53
age of infrastructure 139–40
alternatives to traditional infrastructure 146–8
ASCE rating of investment funds 139
demand characteristics of infrastructure 143–4
equity and infrastructure 144–5
GHG emissions of infrastructures 145
impacts of extreme events on infrastructure 140–2
multiplier effects from 135–6
need estimates 137–8
public priority of 133–4
resource use of infrastructure 146
sources of investment funds 138–9
streets as finance engines 147–8
use of IT in infrastructure operation and maintenance practices 142–3
urban intensity 390–1
relationship with household income 19
urban metabolism (UM) 8–10, 107, 255–82
combined heat and power (CHP) 260
data requirements 258–75
energy 259–61
material flow analysis (MFA) definition 272
material stocks and flows 261–3
MFA of nutrients and salts 271–5
nitrogen, phosphorus, salts 271–2
water 263–7
water-energy-CO2 nexus 266–70
description of method 255–7
diagrams 276–9
urban planning 381–3
emergence of 167
form-based codes (FBC) 390–1
transect planning 390
urban sprawl 390
reversal of 26–7
Urban Sustainability Directors
Network 188, 204
urban water services and climate change 33–56, 266–7
adaptation goals and options for urban water sector 41–3
Brisbane, Australia (case) 43
concept of 32
cost of adaptation 39–41, 51
efforts to reduce GHG emissions in 50–1
impact of climate change on 32, 38–9
mitigation options for water services 43–52
Melbourne, Australia (case) 52
Rhurverband Water System, Germany (case) 51
Philadelphia, Pennsylvania (case) 37
Schoharie Creek basin, New York (case) 35
Wuxi City, Jiangsu Province, China (case) 35
urbanization 1
suburbanization 144
US Computer Emergency Readiness Team (US-CERT) 143
US Conference of Mayors 61
Climate Protection Agreement 302, 305
US Geographical Survey 263
Van Buren, Martin 359
vehicle miles travelled (VMT) 385
reduction of 177–8, 389
Venezuela
Ciudad Guyana 382
Via Campesina 61
Via Verde 70
Vietnam
Ho Chi Minh City 16
Waldheim, Charles 392
Weiser, Mark 435–6
Wholesome Wave 65
Wikipedia 437
workforce development theory 368–9
programs 123, 369
World Bank 135, 255
World Governance Indicators (WGI) 416
World Commission on Environment and Development
*Our Common Future* 413, 427
World Environmental Education Congress 2013 189
World Health Organization (WHO) 144
definition of ‘health’ 166–7
Healthy Cities Initiative 183
water quality standards 271
World Trade Organization (WTO) 59
Wuppertal Institute 439
Zeemering, Eric 421