Index

abscisic acid (ABA) 229–30
absorptive capacity for green technologies model 170–73
abuse of dominant position 202–3, 212–13, 233–5, 251–2
accessibility of food, definition 227–8
ADEF Ltd 114
adequacy of food, definition 229
advance market commitment (AMC) 158–60
advance weather warning systems 229
Advancing Innovation Processes to Solve Social Problems initiative (Rockefeller Foundation) 14, 115–17
Africa
Clean Development Mechanism 75
complaints about plant variety protection 234
IPRs and HIV/AIDS pandemic in 31–2, 72, 95, 212–13
off-grid mobile telephony 53
projected impacts of water shortages in 225
water supplies 182
see also individual countries
African Charter 3
Agenda 21 64
agricultural sector
antitrust issues 233–4
genetic engineering and plant breeding 19, 86, 229–30, 235–6
industrial model of 235
IP and competition concerns 234–6
public–private partnerships 94
agroecology 228–9
Alliance for Clean Technology Innovation 101
always on, power generation 46–7, 53
animal mortality, due to climate change 181
Annan, Kofi 138
Anti-Counterfeiting Trade Agreement (ACTA) 4, 20
Archer Daniels Midland 233, 245
Areva 62
Argentina
absorptive capacity for green technologies 170
Australia
fast-track of green technology patent processing 98
Automobile Association 200
availability of food, definition 227
Background Paper on South–South Co-operation 173
Bain, R. 109
Ban, Ki Moon 223
Barton, John H. 75–6, 77
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal 15, 130, 140–42, 144
Bayh-Dole Act (US) 176
Beddington, John 36
Bent, Mark 115
Berkeley-Darfur Stove 14, 119
Berkeley Convention for the Protection of Artistic and Literary Works 87
Bienkowska, E. 155
Bill and Melinda Gates Foundation 50–51, 54, 159
Environmental technologies, intellectual property and climate change

biodiversity loss 226
biofuels 76, 91, 230, 240
black carbon (soot) 118
Black Phantom 113–14
Blum Center for Developing Economies (UC Berkeley) 120
Bodansky, D. 65, 66–7
Bolivia tech transfer projects 68
Bosch 111
Boyle, J. 71
Braithwaite, J. 163
Brazil absorptive capacity for green technologies 170
CDM projects 68, 133, 135
fast-track of green technology patent processing 98, 166–7
Brewer, T. 112
Brinkerhoff, Parsons 266–7
British Academy project, overview 1–24
collection of IP 12–13
evidence and scepticism 11–12
feasibility 19–22
initial perspectives 1–5
legal fields 16–19
members and meetings 5–7
ongoing developments 8–10
partnership 13–16
website 5
Brundtland Report 64
Brunnée, Jutta 8
Bunge 233
Bush, Vannevar 49–50
California City of Long Beach Airport solar panels 117
Cleantech 100 Report ranking 43
Canada fast-track of green technology patent processing 98
Genome Canada 50
Supreme Court decision 163
Carbonscape 113–14
Cargill 233
Caribbean region public–private partnerships and access to medicines 93
CBS group 117
Center for Food Security 236
certified emission reductions (CERs) 132–4
C40 Cities Climate Leadership Group 31
Chagas disease 93
Chalmers, Davidson 5
Chile absorptive capacity for green technologies 170
China absorptive capacity for green technologies 170
carbon dioxide emissions 37–44
CDM projects 68, 133, 134–5
Chinese State Intellectual Property Office 98
Cleantech 100 Report ranking 43–4
development aid from 173
energy FDI 63
fast-track of green technology patent processing 98
Global Cleantech Innovation Index ranking 169
global emissions by sector (2000–2005) 39
as major investor in non-fossil energy production 40
new generation capacity within 40–41
patent application growth 98
photovoltaic sector 169–70
scientific knowledge production 46
technology transfer from US companies 62–3
wind power technology 168, 170
City of Long Beach Airport, California 117
Clean Development Mechanism (CDM) inequity of project distribution 133
limitations of 133–4
public–private partnerships and 132–5
scope of 11, 132
technology transfer 61, 67–9, 75, 134
Index

‘Cleaning Up’ (The Economist) 2
Cleantech Group 43–4, 169
climate change, overview
destruction of plant/animal species
due to 181
polycentric approach to 31–2
problem structure of 31–2
projected costs of mitigation 89, 237
projected impacts on food supply
223–4
Climate Technology Center and
Network (CTCN) 129, 136–8, 145
Clinton Climate Initiative 53
Colorado State University, Engines and
Energy Conversion Laboratory 121
common but differentiated
responsibilities (CBDRs) 65
Community Patent and Court see
Proposal for a Council Regulation
on the Community Patent
competition law see European Union
(EU)
compulsory licensing
drawbacks of for climate change
technologies 95
EU regime 254–5
food security and 234
private institutional investment and
276–7
property rights and public interest
252–7
public health analogies and 92
TRIPS Agreement and 86, 252–3, 256
US stance on 3, 88
computer programs 9, 85, 87
Conference of Mayors Award for
Excellence in Public–Private
Partnerships (US) 117
Conference of the Parties (COP) 7
UNFCCC
Marrakesh Accords 67–9
technology transfer framework
adoption 174
Conference of the Parties (COP) 9 Basel
Convention
Guidance Document on the
Environmentally Sound
Management of Used and End of
Life Telephones 141
Mobile Phone Partnership 140–42
Open-ended Working Group
(OEWG) 141–2
Partnership for Action on Computing
Equipment 142
Conference of the Parties (COP) 13
UNFCCC
Ad Hoc Working Group on
Long-term Cooperative Action
(AWG-LCA) 69, 72, 89, 175
Bali Action Plan of 2007 2, 12, 68–9, 85, 135–6
Conference of the Parties (COP) 14
UNFCCC
Poznan Strategic Programme on
Technology Transfer 132
Conference of the Parties (COP) 15
UNFCCC
Copenhagen Accords 69, 135–6
Conference of the Parties (COP) 16
UNFCCC
Cancun Agreements 12, 69–70, 89, 129, 132, 136–8
Climate Technology Centre and
Network 69
Technology Executive Committee 69
Conference of the Parties (COP) 17
UNFCCC
Durban Accords 129, 136
Consilvio, M. 165
Consultative Group on International
Agricultural Research (CGIAR)
19, 173, 240
Convention on Biological Diversity
(CBD)
Ad-Hoc Open Ended Working Group
on access and benefit sharing
232
Nagoya Protocol 231, 232
cookstove initiatives 119–22
cooperative research and development
agreements (CARDAs) 176
copyright, TRIPS Agreement and 87
Coravagila, M.A. 171
Cordonier-Segger, M. C. 71–2
see corporate social responsibility
socio-technical regime
collaboration
Correa, C. 154, 173
Cosmic Vision 2015–2025 programme 50
Creative Commons 111
crop devastation 181, 225
crowdsourcing 112–14
Dannenmaier, Eric 8
Darfur
cookstove initiatives 119–21
de la Tour, A. 169–70
deflectors, for lorries 114
De Kalb Genetics Corporation 233
demand side management 48–9
Denmark
CDM projects 134
Derclaye, Estelle 5
developed countries
advocacy of IPR incentives 88–9
CDM projects 133–5
UNFCCC financial revenues and 65–6, 237–8
UNFCCC technology transfer provisions 67–8, 70, 85
CDM projects 133
crop devastation 181, 225
crowdsourcing 112–14
Dannenmaier, Eric 8
Darfur
cookstove initiatives 119–21
de la Tour, A. 169–70
deflectors, for lorries 114
De Kalb Genetics Corporation 233
demand side management 48–9
Denmark
CDM projects 134
Derclaye, Estelle 5
developed countries
advocacy of IPR incentives 88–9
CDM projects 133–5
UNFCCC financial revenues and 65–6, 237–8
UNFCCC technology transfer provisions 67–8, 70, 85
see also individual countries
developing countries/LDCs
absorptive capacity for green technologies 170–73
agricultural technologies 238–40
CDM projects 133
cookstove initiatives 119–22
human rights and see human rights,
priority of ideological opposition to expansion of IPRs 87–8
incentives and enabling environments 176
IP law harmonization 175
need for fast-track processing of green technology patents 98
projected energy infrastructure costs 128
public–private partnerships and access to medicines 93
rate of low-emission energy technologies 91
South to North technology transfers 112
Technology Needs Assessments (TNAs) 131–2
TRIPS Article 66.2 and 153–7, 172
see also Global North/South asymmetry: individual countries
Discover Award (1996) 120
Doha Declaration see TRIPS Agreement (WTO)
Douzinas, Costas 191–2
Dow Chemical 111
Drahos, P. 163, 164
droughts 223–6
Drugs for Neglected Diseases Initiative (DNDi) 17, 93, 161, 206
dumping 172
DuPont 111, 233, 235
Durham University 124
E+Co 123
early stage companies 273–7
Eco-Media 117–18
economic activity, ECJ definition 258
The Economist, ‘Cleaning Up’ 2
Eco-Patent Commons 4, 8, 17, 21, 111–12, 206, 267, 272
Edinburgh International Science Festival 7
EFTA Surveillance Authority 258
Eisai Inc. 93
Elliott, K.A. 161
enabling environments (EE) 101–2, 174–6
energy-efficiency orientation,
Cleantech 100 Report 44
Environfit 118, 121–2
Environfit India Private Ltd 121
environmental justice theories 189–90
environmentally sound technologies (ESTs) 60, 85, 137, 171–2
Ernst & Young, report on electricity shortage in India 57
essential facilities doctrine 202–3, 211
<table>
<thead>
<tr>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
</tr>
<tr>
<td>food security 13, 94</td>
</tr>
<tr>
<td>Ethiopia Institute for Agricultural Research 94</td>
</tr>
<tr>
<td>European Commission (EC)</td>
</tr>
<tr>
<td>block exemptions and guidelines 208, 261–2</td>
</tr>
<tr>
<td>Community Framework for State Aid 260–61</td>
</tr>
<tr>
<td>Competitiveness and Innovation Programme 206</td>
</tr>
<tr>
<td>enforcement and human rights issues 204–5</td>
</tr>
<tr>
<td>Entrepreneurship and Innovation Programme 206</td>
</tr>
<tr>
<td>essential facilities doctrine 203, 211</td>
</tr>
<tr>
<td>horizontal cooperation agreements 208</td>
</tr>
<tr>
<td>human rights, prioritization of 213–14</td>
</tr>
<tr>
<td>Information and Communications Technology 206</td>
</tr>
<tr>
<td>Institutionalized Public–Private Partnership (IPPP) 259</td>
</tr>
<tr>
<td>on intellectual property regimes 249</td>
</tr>
<tr>
<td>Microsoft case 4, 211, 212, 213</td>
</tr>
<tr>
<td>as potential forum for access to essential technologies 211–14</td>
</tr>
<tr>
<td>procurement and subsidies 258–62</td>
</tr>
<tr>
<td>scrutiny of anti-competitive activities 258</td>
</tr>
<tr>
<td>European Convention on Human Rights (ECHR) 204, 250, 251</td>
</tr>
<tr>
<td>European Court of Human Rights (ECtHR) 211</td>
</tr>
<tr>
<td>European Court of Justice (ECJ)</td>
</tr>
<tr>
<td>economic activity, definition 258</td>
</tr>
<tr>
<td>essential facilities doctrine and 203</td>
</tr>
<tr>
<td>hearing of IP cases 211</td>
</tr>
<tr>
<td>opinion on Community Patent Court proposal 210, 255</td>
</tr>
<tr>
<td>European Economic Area (EEA) 253–4, 257, 258, 262</td>
</tr>
<tr>
<td>European Investment Bank 95</td>
</tr>
<tr>
<td>European Patent Office 4, 98</td>
</tr>
<tr>
<td>European Space Agency, Cosmic Vision 2015–2025 programme 50</td>
</tr>
<tr>
<td>European Union (EU)</td>
</tr>
<tr>
<td>Agency for the Cooperation of Energy Regulators 210</td>
</tr>
<tr>
<td>Charter 204, 250–51</td>
</tr>
<tr>
<td>competition law 202–4, 207–8, 251–2</td>
</tr>
<tr>
<td>compulsory licensing 254–5</td>
</tr>
<tr>
<td>design rights 254</td>
</tr>
<tr>
<td>Emissions Trading Scheme 31, 109, 132</td>
</tr>
<tr>
<td>Green Cars initiative 13, 94–5</td>
</tr>
<tr>
<td>Lisbon Innovation research and innovation agenda 206</td>
</tr>
<tr>
<td>member obligations for emissions reduction 206–7</td>
</tr>
<tr>
<td>as potential forum for access to essential technologies 209–14</td>
</tr>
<tr>
<td>procurement and subsidies 20, 258–62</td>
</tr>
<tr>
<td>Proposal for a Council Regulation on the Community Patent (EU) 18,</td>
</tr>
<tr>
<td>20, 210, 255, 256</td>
</tr>
<tr>
<td>2020 Flagship Initiative Innovation Union 17, 206</td>
</tr>
<tr>
<td>see also individual Member States, treaties and initiatives</td>
</tr>
<tr>
<td>e-waste 138, 149</td>
</tr>
<tr>
<td>exclusive marketing rights 100–101</td>
</tr>
<tr>
<td>extreme weather events 225, 226, 229</td>
</tr>
<tr>
<td>failed states 188</td>
</tr>
<tr>
<td>Fass, J. 162</td>
</tr>
<tr>
<td>feed-in tariffs 9, 48, 75–6, 129, 158</td>
</tr>
<tr>
<td>Financial Times</td>
</tr>
<tr>
<td>Boldness in Business awards 9</td>
</tr>
<tr>
<td>Forum for the Future 113–14</td>
</tr>
<tr>
<td>fisheries 226–7</td>
</tr>
<tr>
<td>FJC 121</td>
</tr>
<tr>
<td>Food and Agriculture Organization (FAO)</td>
</tr>
<tr>
<td>International Treaty on Plant Genetic Resources for Food and</td>
</tr>
<tr>
<td>Agriculture 19, 231–3</td>
</tr>
<tr>
<td>food prices 223, 230, 233</td>
</tr>
<tr>
<td>food security, rights-based approach 18–19, 223–41</td>
</tr>
<tr>
<td>advance warning systems and 229</td>
</tr>
<tr>
<td>agroecology and 228–9</td>
</tr>
<tr>
<td>allocation of responsibility 238</td>
</tr>
</tbody>
</table>

Abbe E.L. Brown - 9780857934185
Downloaded from Elgar Online at 11/15/2021 10:30:15AM via free access
antitrust issues 233–4
biodiversity loss and 226
biofuels and 226
climatic change and 181, 227–8
crop devastation and 225
Ethiopian tef 94
financing mechanisms 237–8
fisheries and 226–7
genetic engineering and plant breeding 229–30, 235–6
global food supply, threats to 223–7
international agreements and fora 230–33
international law on 227–8, 242–3
IP and competition concerns 234–7
resource distribution priorities 238–40
rights-based approach 237–40
soil erosion and 226
toxic chemical use and 224, 225–6
water supplies and 225, 229
foreign direct investment (FDI) 62, 63
Forum for the Future 113–14
Foucault, M. 109
France
  mature technologies 68
Franklin, U. 109
Frazer, N. 189–90
Freedom of Information Act (UK) 200–201
Fuji-Xerox 111
G8 159
G20 230
G77 171–2
Gadgil, Ashok 119–20
Gang, Z. 169
Gehring, M. 71–2
General Electric 125
genetic engineering and plant breeding 19, 86, 229–30, 235–6
Genome Canada 50
geo-spatial data and measurement tools 200–201
Germany
  CDM projects 134
  mature technologies 68
Ghosh, S. 164
global administrative law (GAL) 154–5
Global Alliance for Vaccines and Immunization (GAVI) 161
Global CleanTech Innovation Index 169
Global Climate Change and US Law (Gerrard) 71–2
global food supply, threats to 223–7
Global Fund for AIDS, TB and Malaria 161
Global Institute for Justice in Innovation 269
Global North/South asymmetry 32–54
buy one give one approach 114–16
demand side management 48–9
innovation capacity orientation 35–45
IPR expansion/diffusion debates 88–9
solutions to 45–54
South to North technology transfers 112
South to South technology transfers 167–74
state-subsidized innovation systems 49–51
structured R&D competition 49–53
TRIPS Article 66.2 153–7, 172
urbanization and 32–5
see also developed countries;
developing countries/LDCs
Gollin, M. 162
Google 212
Google Streetview 200
Grace, C. 161
Grand Challenges in Global Health initiative 50–51
GreaterGood.org 121
Green, P. 119
Green Cars initiative (EU) 13, 94–5
Green Climate Fund 15
Green Investment Bank 9
greenhouse gas emissions
  HFC-23 gas 133–4
  McKinsey Curve and 72–4
projected rise in 181
reduction of 36–8
  WRI charts 38–9
Grootendorst, P. 158, 160
Index

Guatemala
  technology transfer projects 68

Haites, E. 68
Hall, B.H. 165
Hargreaves Independent Review of IP and Growth 8
Hart, Stuart 125
Haselip, James 9
Health Impact Fund 160
Hegel, G.W.F. 183
Helmers, C. 165
Helveta software 9
Henry, C. 162
Hewlett-Packard 113–14
Hilgartner, S. 163
HIV/AIDS pandemic, in Africa 31–2, 72, 95, 212–13
Holder, Eric, Jr. 233
Holland & Knight 120
hollow ceiling tiles 114
Honkonen, T. 65, 69–70
Honneth, Alex 191
Hubbert curve 36–7
human rights, priority of 3–4, 16–17, 181–95
  access, as definitional problem 187–8
  corporate interests vs. 184–5
  historical narratives and 183–4
  identification of essential technologies and 204–5, 207, 213–14
  legal recognition of 191–4
  recognition of social difference 189–91
  redistribution of resources 189–91
  TRIPS Agreement and 186–7
Humphreys, Stephen 8
hunger see food security, rights-based approach
Hyflux 9

IBM 111
India
  absorptive capacity for green technologies 170
  carbon dioxide emissions 37–44
  CDM projects 68, 133, 135
  Cleantech 100 Report ranking 44
  cookstove initiatives 121
  electricity shortage in 57
  Global Cleantech Innovation Index ranking 169
  global emissions by sector (2000–2005) 39
  green field opportunities 49
  IEA projection of coal consumption in 41
  increase in development aid from 173
  off-grid mobile telephony 53
  solar energy 122–3
  technology transfer amendments (2011 UNFCCC) 59–60
  wind power technology 168, 170
Indonesia
  absorptive capacity for green technologies 170
  CDM projects 133
  technology transfer projects 68
  Industry Technology Facilitator 267
  InnoCentive Inc. 112, 114–15
  innovation capacity orientation 49–51
  innovation contests and grants 112
  Innovation Exchange Inc. (IX) 112–14
  Innovative Waste Kaikoura 124–5
  Institutionalized Public–Private Partnership (IPPP) 259
  intellectual asset (IA) capabilities 268–9
  Intellectual Property and Climate Change (Rimmer) 6, 9–10
  Intellectual Property, Human Rights and Competition (Brown) 1
intellectual property, overview
  barriers to innovation 71
  harmonization of law 175
  Honkonen on 70–71
  innovation capacity orientation 49–51
  nationalization of IP 256–7
  role of IPR 76
  UNFCCC regimes and 2–3
  use it or lose it policies 54
intellectual property rights, peripheral role of 11–12, 59–79
  Cancun Agreements and 69–70
Environmental technologies, intellectual property and climate change

costs assessment framework 75–7
definition 61, 104
enabling environment and 101–2
foreign direct investment and 62, 63
IPR argument 70–77
legal structure of in MEAs 64
McKinsey Curve 72–4
official development assistance and 63–4
patent protection 60
regulatory barriers to deployment 71, 74–5
role in climate regime 61–4
trade and 62–3
UNFCCC and 59–60, 65–9
intellectual property tools, and innovation focus 12–13, 84–102
avoidance of political obstructions 95
background and debate 84–5
developed country need for 88–9
developing country scepticism 87–8
enabling environments 101–2
Ethiopian tef 94
EU Green Cars initiative 13, 94–5
exclusive marketing rights 100–101
incentivization 99–100
innovation cycle and 89–90
IP as non-barrier 90–91
partnership arrangements and creative licensing 93–4
patent processing and 97–8
patent term extensions 98–9
pharmaceutical/public health analogies 92–3
pragmatic solutions 91
projected growth of innovation 89
systematic reforms 96–101
TRIPS Agreement 85–7
undermining of IP 96
UNFCCC technology transfer provisions 85
WIPO, role of 89, 97
Intergovernmental Panel on Climate Change (IPCC)
on available necessary technologies 128
Fourth Assessment Report, on and/and approach 74
limitations of 112
on projected global temperature rise 39
Special Report on Renewable Energy Sources and Climate Change Mitigation (SRREN) 266, 268
International Chamber of Commerce
International Commission on Trade and Sustainable Development
International Council on Human Rights Policy
International Energy Agency (IEA)
BLUE Map scenario 39, 40, 42
on commercial-scale CCS 43
on energy demand projections 36
investment recommendations for India 41
on new generation capacity for China 40–41
projected costs of mitigation 237
projected need for clean technology innovation 89
on strengthening of IPRs 91
International Law Commission 239
International Standards Organization 202
International Telecommunications Union 201
International Treaty on Plant Genetic Resources for Food and Agriculture (FAO) 19, 231–3
International Union for the Protection of New Varieties of Plants (UPOV) 86, 231–2
Inuit peoples 226
IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation (SRREN) 266, 268
Ireland
Smart-Green Economy 109
Istanbul Program of Action 173
Japan
CDM projects 134
mature technologies 68
Patent Office 98
Index

Kalin, T. 159
Karakosta, C. 112
Kieff, S. 162
Kim, H.-E. 166
Kingston, Suzanne 5, 8
knowledge mobilization 35–6, 46
Korea, Republic of
absorptive capacity for green technologies 170
CDM projects 133
Global Cleantech Innovation Index ranking 169
Intellectual Property Office 98
wind power technology 170
Krause-Jackson, F. 119
Kyle, M. 161
Kyoto Protocol (1998)
establishment of 2
future of 153
member obligations 206–7
reduction targets 271–2
technology transfer provisions 67, 68, 130
see also Clean Development Mechanism (CDM)
Lane, E. L. 166–7
Latif, Abdel 70, 79
Latin America
energy FDI 63
public–private partnerships and access to medicines 93
see also individual countries
Lawrence Berkeley National Laboratory (LBNL) 120
Lawrence, P. 64
least-developed countries (LDCs) see developing countries/LDCs
legal principles and identification of essential technologies 17–18, 198–214
competition agreements 207–8
competition approach 200–204
control of data 202
essential climate change technology 198–205
forum for access 209
human rights approach 204–5
IP and human rights 207
IP approach 199–200
new role for European Commission 211–14
proposed new EU Tribunal 210
use of existing tribunal 211
Lema, A. 170
Lema, R. 170
Levi, M. 77
Lewis, J.I. 170
Lex Mundi Pro Bono Foundation 120
Limagrain 233
Lisbon Treaty 8, 204
load shedding 48–9
Loughborough University 114
low-carbon transition 11, 29–54
approaches to 45–54
CleanTech 100 Report ranking 43–4
climate change nexus problems 36
demand side management 48–9
innovation capacity orientation 35–45
knowledge mobilization 46
knowledge-brokering approach 53–4
localized adaptation 45
problem structure of climate change 31–2
urbanization and 32–5
see also Global North/South asymmetry
Maclay Murray & Spens 5
Malaysia
absorptive capacity for green technologies 170
Mandel, G.N. 162
Manhattan Project 49–50
Maplecroft Index 117
marketing rights see exclusive marketing rights
Markusson, N. 75
Marscheider-Weidemann, F. 170–71
Maskus, K.E. 165
Massachusetts Institute of Technology, D-Lab 123
McBarnet, Doreen 7, 14, 15
Environmental technologies, intellectual property and climate change

McInerney, M. 166
McKinsey Curve 11, 72–4
McMahon, Kathryn 5
medium-sized enterprises see small and medium-sized enterprises
Mexico
absorptive capacity for green technologies 170
CDM projects 133
technology transfer projects 68
Miami City Hall, Florida 117
Michaels, A. 154–5
Microsoft 2, 4, 211, 212
Midomo (water system) 124
Millennium Declaration (UN) 138
Mobile Phone Partnership 15, 140–42
Monsanto 18, 19, 233–4, 235–6, 240
Montreal Protocol on Substances that Deplete the Ozone Layer 64–5, 133–4
Moon, S. 154
Mootral 114
Morgan, J. 70
mortality statistics
climate change impact on animal/plant species 118
cookstove smoke and 118
multilateral environmental agreements (MEAs)
legal structure of transfer technology 64
Murphy, K. 68
National Institute of Industrial Property (Brazil) 166–7
National Science Federation (US) 267
nationalization of intellectual property 256–7
natural gas 37, 42–3, 45, 47, 53, 261
Neem Biotech 114
New International Economic Order (NIEO) movement 64
New Zealand
Innovative Waste Kaikoura 124–5
newly industrializing countries (NICs)
absorptive capacity for green technologies 170–72
Nigeria
regulatory barriers to deployment 75
Nokia 111
Obama, Barack
on low-carbon transition 50
off-grid mobile telephony 53
Office of the United Nations High Commissioner for Refugees (UNHCR) 114
official development assistance (ODA) 63–4
Olawuyi, D.S. 75
Olmos, L. 158
open source innovation 112–16
open standards 201, 206–8
Organisation for Economic Co-operation and Development (OECD)
on enabling environments 101–2
on patent term extensions 99
on role of IPRs and innovation 89–90
Oxfam America 119, 120
Paris Convention for the Protection of Industrial Property 20, 256
Parsons, N. 110
Parthasarathy, S. 162
Patent Cooperation Treaty (PCT) (WIPO) 98
patent law harmonization 99–100
Patents and Clean Energy report 4
patents and patent system
Eco-Patent Commons 4, 8, 17, 21, 111–12, 206, 267, 272
green technology policies 166
pan-EU patent proposals 210, 255, 256
patent law harmonization 99–100
patent processing improvements 97–8, 161–7
plant variety protection 86, 231–4
political and social implications of patent approval 163–4
priority vouchers and 160–61
Roundup Ready® patent expiration 235
technology sector and 76–7
Index

technology transfer and 90–91
TRIPS Agreement and 85–6
peak oil arguments 36–7
Perez, F. Xaver 142
Persistent Organic Pollutants (POPs) 225–6
Peterson, S. 62–3
pharmaceutical/public health analogies
abuse of dominant position in South Africa 2, 185, 212–13
Doha Declaration 92–3, 254
EU compulsory licensing 254–5
exclusive marketing rights 100–101
IPRs and HIV/AIDS pandemic in Africa 31–2, 72, 95
neoliberalism agenda and 185
public–private partnerships 93–4
push and pull mechanisms 157–61
Philippines
absorptive capacity for green technologies 170
photovoltaic sector 91, 169–70
Pilot Program for Green Technologies Including Greenhouse Gas Reduction (USPTO) 97–8, 166
Pitney Bowes 111
plant variety protection 86, 231–4
Pogge, Thomas 160
Polizzotto, Paul 117
Popular Science awards 120
population growth projections 33–5
Potential Energy 119–21
poverty alleviation see human rights, priority of
Powering the Nation (Brinkerhoff) 266–7
private institutional investment 21–2, 271–7
funding assessment criteria 275
funding gaps 271–3
IPR as barrier to entry 275–6
return on investment 272–3
sharing/compulsory licensing, drawbacks of 276–7
start-up and early stage companies 273–5
pro bono legal assistance 120

product development partnerships (PDPs) 93, 161, 176
project design documents (PDDs) 68
property rights and public interest 19–20, 249–63
compulsory licensing 252–6
EU competition law 251–2
private–public collaboration 257–8
procurement and subsidies 258–62
state ownership 256–7
Proposal for a Council Regulation on the Community Patent (EU) 18, 20, 210, 255, 256
prosumers 42, 48–9
public capital markets 274
public health analogies see pharmaceutical/public health analogies
public–private partnerships 4, 14–15, 128–45
access to medicine due to 93
Clean Development Mechanism and 132–5
cooperative research and development agreements (CARDAs) 176
creative licensing and 93–5
drawbacks of 94–5
future trends 135–8
Mobile Phone Partnership 140–42
technology transfer 156–7
UN climate change regime and 130–32
under other MEAs 138–40, 143
push and pull mechanisms 157–61
advance market commitment (AMC) and 158–60
modernization programmes and 160
priority vouchers and 160–61
public health and 157–8, 160, 161
reward systems 159–60

Raciti, E. 110
ravuconazole 93
Rawls, John 190
Real World of Technology lecture (Franklin) 109
Red Button Design Ltd 124
Environmental technologies, intellectual property and climate change

Redgewell, Catherine 8–9
reducing emissions from deforestation in developing countries (REDD+)
reporting 69
refrigerant HCFC-22 133–4
Registered Designs Act (UK) 254
renewable energy industry 20–21, 265–70
global challenges 265–6
intellectual asset (IA) capabilities 268–9
organizational oversight 269
studies and research on 266–7
technology advancement 266–8
technology roll-out 268–9
Report of the Special Representative of the Secretary General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises (Ruggie) 9
research and development
private sector funding of 267
structured R&D competition 49–53
Rimmer, Matthew 6, 9–10
Rio +20 (2012) 8
Rio Declaration on Environment and Development (1992) 3, 64, 67
Robinson, Mary 192
Rockefeller Foundation 14, 114, 115–17
Roosevelt, Franklin D. 49–50
Roundup Ready® herbicide resistance 235
Royal Dutch Shell Plc 14, 118–19
Ruggie, J. 9
Rwanda 229
Sarnoff, J.D. 165–6
Schlosberg, D. 189–90
Scotland
Green Investment Bank 9
renewable energy 9, 267
*The Scotsman*, ‘Financial spark needed to re-energise renewables sector’ 9
SDM Institute 123
seed prices 235–6
SELCO Solar PVT Ltd 122–3
Sen, A. 193
Seres, S. 68
Shah, Rajiv 223
Shell Foundation 118–19, 121
Shri Hari Industries 120–21
Singapore
absorptive capacity for green technologies 170
small and medium-sized enterprises
advance market commitment (AMC) and 160
patent law harmonization for 99–100
private institutional investment 273–7
renewable energy technologies and 266
smart grid technologies 42, 43, 47–8
smart meters 47, 48
social businesses 194, 197
see also socio-technical regime collaboration
Social Science Research Network (SSRN) 4, 6
social theorists, on definition of technology 109
socio-technical regime collaboration 13–14, 108–26
buy one give one approach 114–16
for-profit environment collaborative innovation 112–18
innovation encouragement, examples of 110–12
not-for-profit environment collaborative innovation 118–23
open source innovation 112–16
software innovation 9, 85, 87
soil erosion 226
solar energy 76, 117, 122–3, 266, 267
Somalia
drought related famine 223
Sommer, T. 166
Sony 111
South Africa
absorptive capacity for green technologies 170
increase in development aid from 173
pharmaceutical firm litigation 185, 212–13
pharmaceutical patents 2, 212–13
Index

Abbe E.L. Brown - 9780857934185
Downloaded from Elgar Online at 11/15/2021 10:30:15AM
via free access

Sovacool, B.K. 165
start-up companies 273–7
state ownership of intellectual property 256–7
state-subsidized innovation systems 49–51
Stevenson-Wydler Technology Innovation Act (US) 176
Stiglitz, J.E. 162
Stockholm Declaration, Principle 20 64
Storage Networking Industry Association, Green Storage Power Measurement Technical Specification 201
Subsidiary Body for Implementation (SBI) 130–31
Subsidiary Body for Scientific and Technological Advice (SBSTA) 130–31
Sun Microsystems 211
Sunder, M. 163
SunNight Solar 14, 114–16
Sunspec 17, 202
Suntech Power 169
Suzlon Energy 169
Syngenta Foundation for Sustainable Agriculture 94, 233
synthetic biology innovation 162
Taiwan
absorptive capacity for green technologies 170
Tan, X. 169
Tapscott, D. 112, 114
Tara Stove 119
Taylor, Douglas 5, 9
Technology Innovation for Sustainable Societies 6
technology, social theorists on 109
technology and social contract 163–4
technology transfer, holistic perspective 15–16, 152–77
enabling environments 174–6
patent system 161–7
public–private partnerships 153–7
push and pull mechanisms 157–61
South to South technology development/transfer 167–74
TRIPS Agreement 153–7
tef (cereal crop) 94
terms of reference (TORs) 141
Thailand
absorptive capacity for green technologies 170
thermal power/CCS 43, 68, 75–7
Tibaijuka, Anna 31–2
tidal energy 267
Towards a Holistic Approach to Technology and Climate Change (Brown) 84
toxic chemicals and food supply 224, 225–6
trade marks 254
Trade Related Intellectual Property Rights see TRIPS Agreement (WTO)
trade secrets 86–7, 90
Transition Towns movement 110
Treaty of Paris 257
Trees for Travellers (T4T) initiative 124–5
TRIPS Agreement (WTO)
Article 66.2 153–7, 172
compulsory licensing 252–3, 256
copyright protections 87
Doha Declaration 92–3, 95, 231
as forum for IPRs 89
IP and global food supply 231
IP law harmonization 175
national laws and 199–200
neoliberalism agenda of 185–7
open standards and 207
paragraph 6 solution 92
patent owner rights 163
patent requirements 85–6
plant variety protection 86, 231–4
scope of 3, 9
standards of 85–7
technology transfer 16
technology transfer rates due to 91
trade secrets 86–7
unfair commercial use 101
Tsioumani, Elsa 7
TTClear internet portal 131
UNEP-ICTSD-EPO survey, on Global South technology transfer 168
Unified Patent Court 20
United Kingdom (UK)
Carbon Capture 6, 12
Competition Commission 254
Copyright Tribunal 254
Department for Energy and Climate Change 78
Department for International Development 159, 160
fast-track of green technology patent processing 98
Financial Transparency (EU Directive) Regulations 260
Green Investment Bank 9
Intellectual Property Office 8
mature technologies 68
private institutional investment in 274
solar energy 266
Technology Strategy Board 21, 267
United Nations Committee on Economic, Social and Cultural Rights (CESCR) 238–9
United Nations Conference on Environment and Development (UNCED) 66–7
United Nations Conference on Trade and Development (UNCTAD) 156
United Nations Development Programme (UNDP) 237
United Nations Environmental Programme (UNEP) 4
United Nations Foundation 118–19
United Nations Framework Convention on Climate Change (UNFCCC) 2, 97
enabling environments 101–2, 174–6
Expert Group on Technology Transfer (EGTT) 4, 11, 69, 174
food security 19
future trends statistics 181
Global Environment Facility (GEF) 131
Green Climate Fund 131, 136
ideological opposition to expansion of IPRs by NGOs 87–8
plant variety protection, complaints by African farmers 234
Technology Executive Committee (TEC) 15, 129, 136–8, 144–5
Technology Needs Assessments (TNAs) 131, 155, 176
technology transfer amendments by India 59–60
technology transfer provisions 65–9, 85, 130–31
see also headings at Conference of the Parties (COP) UNFCCC; Kyoto Protocol (1998)
United Nations Industrial Development Organization (UNIDO) 156
United Nations (UN)
Department of Economic and Social Affairs 33–4
Global Compact 111, 138, 143
see also individual divisions and conventions
United Nations World Food Programme (WFP) 223, 230
United States Foundation 14
United States Patent and Trademark Office (USPTO)
Pilot Program for Green Technologies Including Greenhouse Gas Reduction 97–8, 166
United States (US)
annual foreign direct investment 63
biofuel incentives 240
CDM projects 134
Cleantech 100 Report ranking 43
Index

compulsory licensing regimes and 3, 88
Eco-Media model 117–18
fast-track of green technology patent processing 98
global emissions by sector (2000–2005) 39
grain production for ethanol 230
Green New Deal 109
mature technologies 68
opposition to IP restrictions 12
scientific knowledge production 46
Universal Declaration of Human Rights property rights 250
University of Berne 94
University of Edinburgh
Obtaining, Protecting and Using Essential Environmental Technologies project 84
urbanization 32–5
Uruguay Round (GATT) 163
US Agency for International Development (USAID) 223, 240
US Agriculture Department (USDA) 230, 235–6
US Department of Justice (USDOJ) antitrust and agriculture report (2012) 235
enforcement rhetoric 233–4
US Energy Information Administration (EIA)
on energy-related carbon dioxide emissions 37–8
projections on coal consumption in India 41
US Environmental Protection Agency (EPA)
on founder of EcoMedia 117
US General Accounting Office (GAO) on foreign patent costs 99
UV Waterworks 120
Van Overwalle, C. 164
Varney, Christine A. 234, 235
Vaver, D. 164
Venezuela
absorptive capacity for green technologies 170
venture capital (VC) see private institutional investment
Vietnam
technology transfer projects 68
virtual biotechnology firm model 52–3
virtual power plants 48–9
Voluntary Guidelines (FAO) 228
Walz, R. 170–71
water supplies 182, 225
Watson, J. 78
Weisbrot, M. 110
Wellcome Trust 93
Werksman, Jacob 9
Westinghouse 62–3
Who Profits From Climate Change? (public engagement event) 7–8
Williams, A.D. 112, 114
wind power technology
emerging developing countries in 168
innovation cycle 267
patents as non-barrier to access 91
role of IPR 76
win-win scenarios 97, 105, 172
World Bank
Global Environment Facility (GEF) 62, 63–4, 131
Special Rapporteur on the Right to Food 230, 239
Strategic Climate Fund 53
SunNight Solar initiative 114
World Business Council for Sustainable Development (WBCSD) 111, 157
World Food Index 230
World Food Summit 228
World Health Organization (WHO) 158, 234
World Intellectual Property Organization (WIPO)
Committee on Development and IP (CDIP) 100
Expert Group on Technology Transfer (EGTT) 4
as forum for IPRs 89
green technology policies 166
on innovation cycle 90
Intergovernmental Committee on Genetic Resources, Traditional Knowledge and Folklore 232
IP and global food supply 231
patent law harmonization 99–100
public–private partnerships 156
report on patent system and technology transfer 165
scope of 97, 98
Standing Committee on the Law of Patents (SCP) 8, 100
transfer technology, definition 104
Trilateral Offices 98
World Resources Institute (WRI)
on emission reduction 37–9
global emissions by sector 38, 39
World Trade Organization (WTO)

interface with environmental law 4
neoliberalism agenda of 185–7
South to South technology
development/transfer 171
see also TRIPS Agreement (WTO)
World Wide Fund for Nature (WWF) 169

Xerox 111

Yeung, Karen 7
Young, I. 189–90
Young, Margaret 8
Yunus, Mohammed 194, 197

Zimmerman, E. van 164