abundance 15, 16
cases of 20–22
scarcity and 18
security versus 16
abundance-curse approach 274
abundance theory 76–7, 79–80, 278
empirical perspective 77–9
Acosta, L.J. 80
adaptive capacity 71
adaptive learning 262, 267–9
administration fines 291, 292
Afghanistan 69–70
Africa 22
population 19
Agarwal, B. 200
agricultural production 90
AIIB see Infrastructure Development Bank (AIIB)
air pollution
India 203
Nepal 216
Akbaruddin, S. 195
Al-Hamamre, Z. 234
Allan, J.A. 50, 51
Allan, T. 52
“Alliance Sahel” 98
alternative discourse(s) 196–201, 207
alternative security 3–7
alternatives in action 200–201
Amadiba Crisis Committee (ACC) 110–11
Amazon’s forest fire 260–61
annual water yield (AWY) 264
Anthropocene 27–30, 34, 36, 37, 197, 201, 222–3
anti-bribery 291
anti-corruption 291
Arab countries, food vulnerability in 229–30
Arab world 228
Aral Sea crisis 163–4
aridity indexes 50
armed conflicts 70, 132, 220, 273, 275, 276, 280
greed theories of 278
armed violence 70
Arria formula 245, 250
Arroyo-Quiroz, I. 120
ASEAN see Association of Southeast Asian Nations (ASEAN)
Association of Southeast Asian Nations (ASEAN) 150–53
AWY see annual water yield (AWY)
Ba, B. 92
bad environmental governance, Nepal 222
Bagrepôle scheme 96, 97
Bandyopadhyay, J. 267
Ban-Ki Moon 243
Barlow, M. 81
Barnett, J. 35
Barua, A. 268
Bates, B.D. 46
Bebbington, A. 103
Belt and Road Initiative (BRI) 136–7, 313, 317
benchmarking water security 49–51
Benjaminsen, T. 92
Bicchieri, C. 96
Binningsbø, H.M. 281, 284
biodiversity 203–4, 249
blue water management 95, 97
Blum, S. 78
Boko Haram 69
Born, C. 243
bottle water consumption 81
Brahmaputra dialogue 268
Brahmaputra river basin (BRB)
annual flow 264, 266
climate change impact 266–7
complex adaptive system (CAS) of 263–4
emergence and adaptive learning 267–9
interactions of elements 264–6
nonlinearity, feedbacks and uncertainty 266–7
feedbacks in 266
floods 268
governmental plans and interventions 265
monsoon variability and 266
nonlinearities in 266
scarcity–security–sustainability linkages in 267, 268, 270
sediment load 266
three-zone characterization 264
uncertainty in 266
water availability 265
water governance 265–6
water management 267, 268, 270
water sharing by three countries 264–5
water-transfer plans 265, 270
Index 341

Brandt, W. 192
BRB see Brahmaputra river basin (BRB)
BRI see Belt and Road Initiative (BRI)
bribery 290–92
Brinkman, H.J. 16
Brisman, A., Green Criminology 120
Brown, L. 5
Brunnschweiler, C.N. 79
Brzoska, M. 243
Buddhist Dhamma 196
Buddhist ethics 196–7
Bulte, E.H. 79
Burkina Faso 91, 94–6, 99
Butterworth, J. 56
Buzan, B. 5, 43–5

CADF see China-Africa Development Fund (CADF)
carbon intensive economic model 36
CAS see complex adaptive system (CAS)
case management 297–8
cash fines 291
cattle breeding 95, 97
cause–effect relationships 258, 259, 261, 262, 267
Cawood, F. 105
Center for Climate and Security 37
Central Asia
  Aral Sea crisis 163–4
  climate change 166–7
  environmental issues 162
  fossil fuels in 167–9
  hydropower 169–71
  land degradation 164
  radioactive waste 164–5
  renewable energy 171–2
  water management 166
Central Committee of the China Communist Party (CCP) 179, 183
Centre for Airpower Studies, India 195
Centre for Environmental Rights (CER) 109
CER see Centre for Environmental Rights (CER)
CFA see Cooperative Framework Agreement (CFA)
China 313–14
drinking water 178
demigration of 179
engineering-oriented governance 186–7
environmental security
  achievements 185–6
  deficiencies 186–8
  water and 177–9, 188–9
hydraulic engineering 180–81
hydroelectricity 180, 186
population 23
renewable energy 310, 317
River Chief System 183–4, 186–8
soil erosion 177
spatial city concept 182–3, 187
stringent water resources management 183, 186, 187
supply of rare earth 315
two child policy 179
water and environmental security 177–9
water conflicts 178–9
water-conservancy projects 180–82
water issues 188
water-pollution 177, 178
water resources 176–8, 180–83, 186
water rights trading 184–8
water security 177–9, 182–5
water transfer and savings 181–2
China-Africa Development Fund (CADF) 314
China Water Exchange 184–6
Chissano, J. 280
CH Model see Collier/Hoeffler (CH) Model
Choudhury, E. 258, 269
civil society organizations (CSOs) 103, 109–10
Civil War effects, in Nepal 219–20
climate
  crises 18–19
  disruptions 30
  emergency 29–31
  problems 258
climate change 6, 16, 18–20, 26, 29, 30, 33, 34, 89, 98, 185, 202, 229–31, 268, 275–6, 285
adaptation 34, 144–5, 155, 285, 286
Central Asia 166–7
  cultural and 138
  effects on food crop and cattle breeding 90–91
  food security and 141–2
  gender and 138
  health security and 140–41
  and natural resources, on peace negotiations 279–85
  recommendations and future action on 70–71
  research and academia 71
securitization of 195
and security 65, 133–4
in Southeast Asia 134–5
threats 7–9, 37
in transboundary context 64–6
at UN Security Council (UNSC) 242–8
and violent conflict 65
climate-change adaptation programmes 144–5
Climate Change Roadmap 133
climate change-security nexus 195
cross-border attacks 276
climate-disrupted world 30
CSOs see civil society organizations (CSOs)
culture 138
climate school strike 30
Currie-Alder, B. 42
capture 96
cybersecurity 316, 317
Climate Security Mechanism 245
deforestation 143, 203
climate variability effects, Nepal 220–21
demographic transition 23
CNH systems see coupled natural and human
Department of Mineral Resources (DMR) 103
(CNH) systems
development organizations 70–71
department of water and sanitation (DWS)
103, 106
descriptive norms 96
desertification 33, 204
see also social norms
disaster risk plans 155
disaster risk reduction 70
displacement 324, 335–6
development strategies 34
De Villiers, M. 81
development organizations 70–71
dhakama, A. 280
digital forensics expert 298
digital forensics expert 298
Dinar, S. 64, 77
disaster risk plans 155
disaster risk reduction 70
displacement 324, 335–6
dMIP see Department of Mineral Resources (DMR)
document review systems 298
doi Moi, land reforms 142
donne, J. 43
doppelhofer, G. 79, 80
dowd, C. 92
dozer development 213
drinking water 178
droughts 154–5, 280
and water scarcity 68–70
DWS see Department of Water and Sanitation
(DWS)
droughts 154–5, 280
earthquake, Nepal 223
and water scarcity 68–70
european Bank for reconstruction and
development (EBRD)
ecofeminism 199–200
eIA see environmental impact assessment (EIA)
electricity
demand 140, 233
disruption 316, 317
production 168
Elkot, L. 242, 243
El Salvador 283, 284
emergence 258, 262, 267–9
energy
demand 140
vulnerability 230–31
environment 6, 144–5, 192, 213–14, 219, 224,
314–15
gender and 199–200
environmental change 105, 106, 108
environmental conflict 217–18
environmental crime 120–22, 125–6
environmental crisis, complexity in 260–61
environmental degradation 116, 118–19, 202
by natural disaster 153–6
threats 7–9
Environmental Democracy Index (EDI) 124
environmental flow 53
environmental impact assessment (EIA) 106, 110,
217–18
environmental impunity 118–22
definition of 122–3
measurement of 122–8
Environmental Impunity index 124–5
environmental insecurity 156, 202, 206
India 202–6
Nepal 215–18, 224
Southeast Asia 149–55
environmental justice 108, 109, 116, 120–22
environmental law 120–21
environmental mining legislation 106–7
environmental movements 200–201
environmental peacemaking 35–6, 277–85
Environmental Performance Index (EPI) 124,
204–5, 216
environmental protection 118
environmental-related security risks 249, 252, 253
environmental scarcity 2
environmental security 5, 22–4, 192, 221,
249–50, 252
challenges 249–51
in changing climate 26–7
China 177–9
achievements 185–6
deficiencies 186–8
water and 177–9, 188–9
defining 14–15
India 193–5, 206–7
Nepal 212–13
research, growth of 15–18
threats to 267
types 17–18
environmental stress 132, 194, 224
Environment Protection Act (EPA) 214
Environment Protection Rules (EPR) 214
epistemic community of EU 98
eroding lands 204
ethnicities 93
ethnic minorities 138
European Bank for Reconstruction and
Development (EBRD) 165
EU’s epistemic community 98
evidence 299
evidence-based policy-making 107–8
Expert Working Group on Climate-related
Security Risks 245
extrication of data 298
Fairhead, J. 78, 80
Falk, R. 5
Falkenmark, M. 47, 49–51
Fall, R. 15
Famiglietti, J. 51
FCV see Fragility, Conflict and Violence (FCV)
Fearon, J.D. 78
feedback 262
feed-in tariffs (FIT) 171
feminist environmentalism 199–200
“finance for service” exchange 291
FIT see feed-in tariffs (FIT)
flash floods 67, 70
Nepal 222–3
floods 22–223, 268
food (in)security 16–17, 141–2, 326–9
for Syrian refugees 322–4, 326–9
food–water–energy nexus 323
forced displacement 232
forensic expertise 298
forest fires 150, 156
in Amazon 260–61
fossil fuels 29, 30, 32, 36, 162, 230, 231, 235
reliance on 167–9
Fragility, Conflict and Violence (FCV) 8–9
freshwater abundance 81–2
freshwater resources 277, 278
frontier agriculture technologies 323, 334–7
functionalism 4
Funder, M. 82
Gandhi, I. 193
Gandhian alternatives 197–9
GCF see Green Climate Fund (GCF)
GEI plan see Global Energy Interconnection
(GEI) plan
gender 138
and environment 199–200
geoengineering 36–7
geopolitics 36–7, 293, 309–11
renewable energy 308, 315
in Southeast Asia 136–7, 144
Germany 311, 315
renewable energy 309–10, 317
GET see global energy transformation (GET)

Hafendorf, H. 82
Hanh, T.N. 196
Hartzell, C. 278
Haze Agreement 151, 156
haze pollution 150–51, 156
HDI see Human Development Index (HDI)
health security 140–41
Hendrix, C. 16
Himalayas 67, 220, 221, 224, 266
Hindu Kush 67
Hoddie, M. 278
Holocene period 28, 29
Homer-Dixon, T. 246
host community 336, 338
see also refugees
hothouse earth 31, 32, 36
hot wars 19–20
Huaihe River Basin 180
Hulme, M. 57
human 212–13
Human Development Index (HDI) 45
human health vulnerability 230
human intelligence (HUMINT) 299–302
humanity 27–8
human security 3–5, 8, 44, 45, 47, 62, 64, 67, 247
complexity in 260–61
environmental impacts on 108–10
Nepal 212–13, 215–18, 224
measures for 223–4
human well-being, threats to 267
HUMINT see human intelligence (HUMINT)
Humphreys, M. 78, 275
hydro-hegemony 55
hydroponics 334–7
hydropower 168–71, 180, 186

Ibrahim, I.Y. 92
ICCS see International Coastal Cleanup
Singapore (ICCS)
IDMC see Internal Displacement Monitoring Centre (IDMC)
IDSA see Institute of Defence Studies and Analysis (IDSA)
IFAS see International Fund for Saving the Aral Sea (IFAS)
IKI see International Climate Initiative (IKI)
impunity, defined 117–18
income disparities 206
Kaldor, M. 77
Kalpers, J. 234
Karakoram 67
Karimov, I. 169
Kazakhstan, renewable energy 171–2
Keels, E. 282
Keita, M. 92, 93
Keohane, R. 6
knowledge, defined 225
Kornfeld, I. 47
Kravik, M. 245
Kyrgyzstan
hydropower 170
Ku, C. 37, 243
landscape transformation 91
La Camera, F. 312
Lake Chad 33–4, 88–90, 93–4
UNSC Resolution 2349 242, 245, 250
lake desiccation 33
Lal, A. 218
land
degradation 164
insecurity 142–3
productivity 91, 94, 97, 99
reform 142, 282–3
landscape transformation 91
law 294–5
law enforcement investigation 297
Le Billon, P. 78, 80, 278
Le Clercq, J.A. 118
Le Coccoq, B. 92
legal framework 293, 294, 297
legal provisions, Nepal 214–15
Lejieweld, J. 229
Levant, vulnerabilities 228–31
Lewis, S.L. 29
Lindahl, K. 110
livelihood vulnerability 231
LMB see Lower Mekong Basin (LMB)
LMMAs see locally managed marine areas (LMMAs)
locally managed marine areas (LMMAs) 145
Lonergan, S. 284
loss of biodiversity 249
Lower Mekong Basin (LMB) 155
Lujala, P. 275
Machi, K.J. 257
MACUA-SA see Mining Communities United in Action (MACUA-SA)
Mahato, D. 217
Makdisi, S. 78
Malaysia, sea level rise 155
maldevelopment 200
Mali
common trait in conflicts 94–5
ethnic and international factors 93
Lake Chad and Burkina Faso 93–4
natural resources and conflict 92–5
Malone, L. 242
Mao Zedong 180
Marais, L. 107
marine plastic pollution 151–3, 156
marine protected areas (MPAs) 142, 145, 152, 153
Maslin, M.A. 29
Matebesi, S. 108
Maurer, P. 252
Mbeki, T. 47
MDGs see Millennium Development Goals (MDGs)
Mekong River 142, 144
mens rea 292
Mexico 283, 284
attacks against environmental defenders 126–7
crimes and victims 125
environmental crimes in 127
Middle East 22
Middle East and North Africa (MENA) 5, 320, 334
refugee crisis 320–21
vulnerability in see vulnerability in MENA region
water scarcity 68–9
Middleton, N. 42
migration 20, 24, 136, 138, 232–3
Millennium Development Goals (MDGs) 42
Mineral and Petroleum Resources Development Act (MPRDA) 104–6
minerals 314–15, 317
mining 315
conflicts 108
in South Africa see South Africa, mining in
Index

Mining and Biodiversity Guideline:
Mainstreaming Biodiversity into the Mining Sector 106

Mining Communities United in Action (MACUA-SA) 109
Minnitt, R. 105
Mirziyoyev, S. 169, 170
Mitchell, A. 105
Moriarty, P. 54–6
Moss, T. 82
Mozambican National Resistance (RENAMO) 280
Mozambique 280
MPAs see marine protected areas (MPAs)
MPRDA see Mineral and Petroleum Resources Development Act (MPRDA)
MSW see municipal solid waste (MSW)
municipal solid waste (MSW) 233, 234
Murphy, H. 80
Myanmar 135

National Climate Change Programme 185
National Climate Change Response Policy 2011 (NCCRP) 105–6
National Development Plan (NDP) 103
National Energy Act of 2008 106
National Environmental Management: Waste Act (NEMA) 106
National Pride Projects of Nepal 225
national/regional water security 56–7
national security 43–5, 192
India 194–5, 206–7
National Security Policy 2016 of Nepal 214
National Water Act 1998 (NWA) 106
natural disasters 153–6
Nepal 222–3
natural resources 249, 250, 252, 273
abundance 77–80
and climate change on peace negotiations 279–85
and conflict 274–9, 281, 284, 285
exploitation of 275, 278–81, 283, 284
management 94
and peace 277–9
scarcity 277–8, 280
NBI see Nile Basin Initiative (NBI)
NCCRP see National Climate Change Response Policy 2011 (NCCRP)
NDB see New Development Bank (NDB)
NDP see National Development Plan (NDP)
negotiations 279–86
NEMA see National Environmental Management: Waste Act (NEMA)
neo-Malthusian theory 76–7
Nepal 67
anthropogenic behavior 222–3
Civil War effects 219–20
climate variability effects 220–21
constitutional and legal provisions 214–15
corruption 222
deforestation 218
earthquake 223
environmental conflict 217–18
environmental security 212–14
flash floods 222–3
human security 212–14
environmental concerns and effects on 215–18
measures for 223–4
National Pride Projects of 225
noncompliance 220
other major environmental concerns 217
policies, plans and legislation 224–5
politicization of issues 221
poor governance 222
urbanization 219
New Development Bank (NDB) 314, 317
NGOs see non-governmental organisations (NGOs)
Nicholls, E. 278
Nijgadh International Airport 217–18
Nile Basin Initiative (NBI) 52, 55, 268–9
noise pollution, Nepal 217
noncompliance, Nepal 220
non-governmental organisations (NGOs) 70, 125, 189, 297
nonlinearity 262
non-renewable energy 307
non-state armed groups (NSAGs) 89, 92, 94, 97
non-traditional security 140–44
Norman, E. 48–9
normative expectation 97
North America 22
NSAGs see non-state armed groups (NSAGs)
nutrition security 326–9
NWA see National Water Act 1998 (NWA)

Obrador, L. 126
Office-du-Niger 96, 97
One Map of Thematic Geospatial Information 151
One Map Policy Geoportal 151
ontological politics 35
opposition 241, 244, 252, 253
Otis, J. 80
overfishing 141–2
Oye, K.A. 77

Ashok Swain, Joakim Öjendal and Anders Jägerskog - 9781789900668
Downloaded from Elgar Online at 11/15/2021 06:55:26AM via free access
PA see Principal Applicants (PA)
Pakistan 67–8
Palestinian refugee crisis 231–2
palm oil plantations 143, 150
Pandey, P. 82
Pandey, S. 215
Paris Agreement 35, 37, 241, 243, 248, 311
path-dependent policy 52
Paudel, G. 216
peace
agreements 273, 274, 278–85
conflict and 282
natural resources and 277–9
negotiations 279–86
land reform 282–3
peacebuilding 243, 244, 250
peacekeeping 243, 249, 250
peatlands 143, 151
Philippines
marine pollution 153
natural disaster 154
political economy 36
political instability 70
politicization, Nepal 221
polysilicon 315
population 18–19, 23, 24, 136
security 179
post-apartheid mining legislation 105–6
post-conflict peace 282, 283
post-Westphalian peace 277–8
poverty reduction, India 194, 206
power dynamics, Southeast Asia 137–8
Principal Applicants (PA) 325–33
principled pragmatism 269
provenance 299
public participation 188
Quadrennial Defense Review 133
radioactive waste 164–5
Rahman, M.A. 77, 80
Raleigh, C. 92
Ramaphosa, C. 104
Ravnborg, H.M. 82
Razzaz, S. 321
RBO see River Basin Organization (RBO)
Reducing Emissions from Deforestation and Forest Degradation (REDD+) projects 142–3
refugees 7, 231–5, 320–21
crisis 320–21
frontier agriculture technologies for 334–7
hydroponics for 334–7
jobs for 336, 337
matching needs of 335–7
Per capita income 337
poverty 337
Syrian see Syrian refugees
regreening 91
renewable energy 171–2, 307–8
geospolitics 308, 315
irreversible 309–11
new alliances and initiatives for 311–14
supply chains and international trade 315, 316
renewable water resources 228
rents 274–5
resource management 82
resource scarcity 275–7
reversible harms 118, 119
“Right to a clean environment” 214, 224
riparian governments 70–71
River Basin Organization (RBO) 63, 64
River Chief System 183–4, 186–8
Rockstrom, J. 47, 49–51
Rogun Dam 169, 170
Ross, M. 78, 80
Ruddiman, W. 28
rural transformation 36
Russia, renewable energy 310
Rustad, S.A. 281, 284
Rutledge, C. 109
Sachs, J.D. 78, 79
Sadaka, R. 78
SADC see Southern African Development Community (SADC)
Sadoff, C.W. 48
Sahel 90–2, 94–6, 98
Sanchez, F. 78, 80
Saud, B. 216
Saudi Arabia, renewable energy 310
Savenije, H.H.G. 54
scarcity 15, 20, 257, 262–3, 267–70, 275–8, 280, 281
and abundance 18
cases of 20–22
types of 15–16
see also abundance
Schenkels, B. 252
Scott, J.C. 136, 137
Scott, S. 243
SEA see Strategic Environmental Assessment (SEA)
sea-level rise 2, 3, 68, 135, 154, 155
securitization 195
security 4, 15, 35, 41–5, 63, 257, 262–3, 267–70
versus abundance 16
climate change and 133–4
defined 41
energy 140
environment 144–5
environmental see environmental security
food 141–2
human see human security
land 142–3
non-traditional 140–44
in Southeast Asia 138
traditional 139
water 144
water in 46–7
Sen, A., food security 16
Senegal 95
sentencing and fines 295
Shah, S.G. 218
Shearing, C. 17
Shiva, V. 199–200
Silk Road Fund (SRF) 313–14
simple systems 259, 261
Singapore
haze pollution 151
marine pollution 153
SLAPP see Strategic Litigation against Public Participation (SLAPP)
social norms 96–7
social security systems 97
soil erosion 177
SolarCity Simulator 312
solar energy 171–2
solid waste management (SWM) 234, 235
Solomon, S. 51
Sondershaus, F. 82
South, N. 122
Green Criminology 119
South Africa
mining in 103
civil society responses 108–10
conflicts in 104
environmental impacts on human security 108–10
environmental legislation in 106–7
evidence-based policy-making 107–8
post-apartheid legislation in 105–6
traditional leadership 107
water security 53–4
South African Department of Water Affairs 54
South America 22
Southeast Asia
climate change in 134–5
conflict in 135–6, 139
culture on climate change 138
environmental insecurity 149, 156
forest fires 150, 156
gopolitics in 136–7, 144
haze pollution 150–51, 156
marine plastic pollution 151–3, 156
natural disaster 153–6
non-traditional security 140–44
security in 138
state power in 137–8
traditional security 139
Southern African Development Community (SADC) 104
Southern African Power Pool (SAPP) 53
Southern Sudan, oil reserves 280
South Korea 315
South-to-North Water Transfer Project 181, 186
specialist tactics 299–300, 304
sponge city concept 182–3, 187
Sprout, H. 15
Sprout, M. 15
SRF see Silk Road Fund (SRF)
state fragility 35, 133–4
State Grid of China 314
state power 137–8
state security 43, 44
Strategic Environmental Assessment (SEA) 108
Strategic Litigation against Public Participation (SLAPP) 110
stringent water resources management 183, 186, 187
sustainability 77, 257, 262–3, 267–70, 314
sustainable development 284
Sustainable Development Goals (SDGs) 29, 42, 54, 55, 140, 206, 208
Swain, A. 16, 220
SWM see solid waste management (SWM)
Syria 43, 68
Syrian refugees 232–5, 321
food and nutrition security 326–9
food insecurity 322–4
housing needs and water scarcity 329–30
income and economy 330–33
poverty 337
socio-economic profile of 324–6
system “resilience” 71
system stability 43
tactics 296, 299–300, 303–4
Tajikistan, hydropower 169, 170
threat 42, 43, 46
threat multipliers 8, 242, 253, 276
Three Gorges Dam Project 180
Tickner, J.A. 43
Tinker, C. 242
Toktogul hydropower plant 170
tolerability of risk 49
Traditional and Khoi-San Leadership Bill 107
traditional leadership and mining 107
traditional security 139
transboundary cooperation 55–6
Transboundary Haze Pollution Act 2014 151
transboundary river basin 55, 62, 63
agreements 64, 67, 71
climate, water and security in 64–6
disaster impacts through 66
future policy research for 71
governance mechanisms in 71
recommendations and future action on 70–71
transhumant pastoralism 90
Trump administration 26, 32, 35
Tuarags 93
Turkmenistan, renewable energy 172
two child policy of China 179

United Arab Emirates (UAE)
Ullman, R.H. 5, 15
uncertainty 262
UNEP see United Nations Environment Programme (UNEP)
UNFCCC see United Nations Framework Convention on Climate Change (UNFCCC)
UN Integrated Strategy for the Sahel (UNISS) 97
UNISS see UN Integrated Strategy for the Sahel (UNISS)
United Arab Emirates (UAE)
Article (373) – Federal Law (3) of 1987 (Penal Code) 295
Federal Law No. 7 of 2002 295
renewable energy 310, 311
United Nations Environment Programme (UNEP)
7, 8, 249–51
United Nations Framework Convention on Climate Change (UNFCCC) 244, 248, 253, 311, 317
United Nations Security Council (UNSC) 97–8, 195, 241
climate change at 242–8
increasing activity and momentum 242–5
resolutions 242, 243, 245, 247, 249–51
role 248
understanding of climate security 246–7
climate security 246–8
debates 251
risks 243, 245–8, 251, 253
environmental-related security risks 249, 252, 253
environmental security challenges 249–51
protection of environment in armed conflict 251
UNSC see United Nations Security Council (UNSC)
uranium waste 164–5
urbanization, Nepal 219
USA 315
renewable energy 309, 310
Uzbekistan
hydropower 169, 170
renewable energy 172
Van Hofwegen, P. 48, 49, 51
Verner, D. 229, 330, 331
Vietnam
forestry sector 143
marine pollution 153
village-level self-sufficient economy 198
violence 33, 35, 36, 133
violent conflict 93–5, 220–21, 274, 278
violent radicalisation 94
vulnerability 41–3, 46
in MENA region
energy 230–31
food 229–30
human health 230
livelihood 231
of water resources 228–9, 235
Wallensteen, P. 35
Waltz, K. 44
Wantchekon, L. 79
Warner, A.M. 78, 79
Warner, J. 55
waste generation and management 204
waste management 235
wastewater generation 233
water
  commercialization 82
  conflicts 65–6, 82–3, 178–9
  consumption 57
  crisis 40, 47, 52, 57, 69
  and environmental security 177–9
  governance 265–6
  insecurity 64, 65, 69, 70, 144
  pollution 177, 178, 203, 215–16
water-conservancy projects 180–82
water cooperation 62, 64, 69
water crowding indicator 49–51
water diplomacy 268
water–energy–food (WEF) nexus 40, 71
water management 95, 97, 166, 267, 268, 270
  West Africa 89–91
water policy 181, 183–4, 187
water-related poverty 178
water resources
  management 183, 186, 187
  vulnerability 228–9, 235
water rights trading 184–8
water scarcity 5, 65, 202–3, 230, 234
  drought and 68–70
  MENA regions 68–9
  refugees 329–30
water crises and 69
water security 47–9, 63
  benchmarking 49–51
  challenges to 51–4
  China 182–5
  defined 48, 63
  national/regional 56–7
  policy, law, institution 55
  policy and practice 53
  projects for 54
  psychology of consumption 57
  South Africa 53–4
  three critical issues 54
  transboundary cooperation 55–6
water shortages see water security
water transfer and savings 181–2
water wars 276
Weir, D. 248
Wendt, A. 4
Wennmann, A. 275
West Africa, land and water management 89–91
Western civilization 198
Westing, A.H. 5
White, R., Green Criminology 119, 120
Widodo, J. 143, 151
William (Prince) 52
wind energy 171
Wittfogel, K. 51
Wooden, A.E. 80
Woodwell, D. 78
World Resources Institute (WRI) 46
world water crisis 40, 47, 52, 57
WRI see World Resources Institute (WRI)
Wyatt, T. 120
Xi Jinping 136, 186, 314, 318
Xolobeni community 104, 110–11
Yoffe, S. 277
Zachrisson, A. 110
Zwijnenburg, W. 252