Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

# Index

Adaptive Collaborative Management, 18-19 Uganda, 179 advocacy coalition groups, 2 African Development Bank, 130, 133 agroforestry, 147-148, 151, 269, 364 Aichi Biodiversity Targets, 6, 45 AIDESEP, 314 air pollution, 73 Al Shahaah income from charcoal, 197, 213-214 Alliance for Sustainable Landscapes, 312 Amazon, 301-325 Amazon Fund, 124 biotic pump theory, 39 carbon storage, 43 cattle, 204, 209 certification, 72, 74, 76 Colombia, 207-208 deforestation, 39, 121, 208, 226, 288 economic development, 40 ecosystem change, 39 freshwater ecosystems, 35 gold extraction, 323 illegal logging, 207 illegal mining, 209 Indigenous peoples, 314, 324 multi-stakeholder processes, 302, 324 Peru, 24, 301, 310, 318, 323 protection, 22, 224 American Tree Farm System, 63, 93 argan oil, 187 Argentina bioeconomy, 232 certification, 71-72, 84 artisanal agriculture, 354 artisanal logging, 128 artisanal mining, 356 Australia Australian Forest Certification Scheme, 63 Australian Forestry Standard, 340 biodiversity, 290 impacts of certification, 92

Indigenous territories, 290 legal sourcing of timber, 341 avoided deforestation, 45 Bantu, 130 Batwa Pygmies, 130, 132 BDO, 239 behavioural norms, 111 benefit-sharing, 72, 129, 320 Benin illegal rosewood harvesting, 207 best management practices and certification, 68, 80, 106 bio-based chemicals, 239, 243 biochemicals, 240, 243, 333 biodiesel second generation, 247 biodiversity and certification, 67-68, 71, 76, 89, 95-96 and forest management, 290 and oil palms, 271 and plantations, 338 and tropical forests, 33 Australia, 290 Bolivia, 42 Brazil, 290 Canada, 290 community forests, 367, 369, 372 community-managed forests, 290 conservation, 73, 78, 148, 153, 161, 270-271, 346, 349, 368 environmental security, 224 fire regimes, 159 illegal logging, 219 Indonesia, 270 Liberia, 355 loss, 141, 167, 218 loss in Indonesia, 41 monitoring, 153, 159, 347 in national forest monitoring, 49 offsets, 139 payments for ecosystem services, 139, 150

384

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

INDEX 385

Peru, 308 SDG 15, 5 targets, 369 tropical rain forest, 218 tropical rain forests, 42 versus development, 270 versus fuelwood production, 273 bioeconomy, 22 as catalyst for industrial change, 246 biomass supply, 338 carbon storage, 333 catalyst for innovation, 251 definition, 231 emerging markets, 236-237, 243 implications for global forests, 252, 338 investment opportunities, 251 leadership by Nordic countries, 246 policy incentives, 255 policy requirements, 253 political involvement, 23 potential revenues, 244 roundwood demand, 252 supportive policies, 251, 253 traditional products, 232 uses of industrial wood, 234 bioenergy increased efficiency, 234 inefficient production technologies, 252policy incentives, 236 bioethanol, 250 biofuels, 243 advanced, 247 carbon emissions associated with palm oil. 219 emerging products, 238 first generation, 240 increasing demand, 282 market implications, 243 new products, 246, 250 second generation, 243 share of global market, 240 supportive policies, 253 biogenic volatile organic compounds, 44 biomass energy, 333 biomaterials, 333 bioplastics, 243 new products, 237 bioproducts new products, 23

product diversification, 247 wood-based, 237 biorefinery, 243, 247, 250 Biorefinery, 248 biotic pump theory, 39 Bolivia biodiversity, 42 Brazil nuts, 35 certification, 71, 76 deforestation, 288 income from forest products, 35 recognition of Indigenous peoples, 281 Borneo, 271 Brazil Amazonas, 109, 121-122, 204 biodiversity, 290 Bolsa Floresta, 108, 134 Bolsa Floresta programme, 121-122 cattle, 40, 121, 204 certification, 72, 74, 76, 90 Coca-Cola Brazil, 124 deforestation, 74, 121, 288 drought, 39 economic development, 40 extractive reserves, 280 Forest Certification Programme (Cerflor), 63 Fundação Amazonas Sustentável (FAS), 122 illegal logging, 49, 121, 124, 198, 227 impacts of deforestation, 39 import of illegally logged timber, 207 Indigenous rights, 50 Indigenous territories, 288-289 Iari Florestal, 90 land grabs, 40 Marriott International, 124 opposition to global forests convention, 44 Para, 35 Plan for Protection and Combating Deforestation in the Amazon, 22 Plan for Protection and Combating Deforestation in the Amazon (PPCDAM), 224 Programme Terra Legal, 121 Public Forest Management Act, 121 pulp and paper manufacturers, 221

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

### 386 INDEX

Brazil (cont.) recognition of Indigenous peoples, 281 REDD+, 181 Samsung Brazil, 124 soy, 40 Brazil nuts Bolivia, 35 bricolage, institutional, 170 British Virgin Islands as tax haven, 217 Burkina Faso adaptive capacity of women, 172 illegal rosewood harvesting, 207 plantations, 172 REDD+, 182 shea butter producer groups, 187 bushmeat, 368, 378 Cameroon, 35 demand, 368 Liberia, 368 Cambodia payment for ecosystem services, 149 support for community forests, 292 Cameroon bushmeat, 35 community forestry, 282 deforestation, 74 REDD+, 181 support for community forests, 292 wild fruits, 35 Canada biodiversity, 290 British Columbia, 84 Canadian Forestry Standard, 340 Canadian Standards Association, 77, 83 certification, 73, 78 certified forest area, 64 Forest Bioeconomy Framework for Canada, 232 forest utilization, 233 forests as carbon source, 376 Indigenous territories, 290 Ontario, 73 PEFC certification, 96 Quebec, 73 Sierra Club of British Columbia, 89 Sustainable Forest Management Programme, 63 Sustainable Forestry Initiative, 340

Cancun Agreement, 110, 180 capacity-building and community forests, 292 and women, 179 Madagascar, 153 carbon access to markets, 111 and community forests, 287 and property rights, 108 bonds, 311 carbon forestry, 148 changes in stocks, 108-109 community forests, 283 credits, 227 decarbonisation, 47, 332, 338 emission quotas, 109 emissions, 278, 287, 363 emissions form deforestation, 43 emissions from drained peatlands, 197 footprint, 332 forest stores, 33 global budget, 336 global markets, 47 land-based carbon credits, 47 leakage, 111 markets, 119, 134 monitoring, reporting and verification (MRV), 115 offsetting, 49, 139 payments for ecosystem services, 150 peat swamps as sinks, 268 prices, 119, 121, 134 property rights, 111 sequestration, 160, 172 stocks, 172, 287 storage and certification, 99 storage by tropical forests, 43 storage in forests, 50 trading, 111, 119, 121, 133-134, 180 carbon density, 287, 292, 294, 381 carbon dioxide fertilization of forests, 43 uptake by forests, 43 caste exclusion based on, 176 caste, exclusion based on, 177 cattle Amazon, 204, 209

and deforestation, 38, 121

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

INDEX 387

Brazil, 40, 121 Colombia, 209 cellulose, 239, 250 Center for International Forestry Research National Biomonitoring Strategy for Liberia, 369 Central African Republic illegal charcoal production, 211 Centre for International Forestry Research Global Comparative Study of REDD+, 310 certification, 59-74 Amazon, 74, 76 and deforestation, 73 and forest policy, 7 Argentina, 71-72, 84 as co-governance, 62 as governance mechanism, 3 as policy instrument, 59, 64 audit reports, 77 Australia, 340 best management practices, 68, 106 Bolivia, 71, 76 Brazil, 74, 76, 90 Canada, 73, 77–78, 96, 340 chain of custody, 66, 68 Chile, 71-72 China, 378 Congo Basin, 72 controlled wood, 66 corporate social responsibility, 62 costs and benefits, 85 criticisms. 89 differences between systems, 77 Ecuador, 71 Estonia, 77 Europe, 76 fibre sourcing, 68 forest management, 340 forest products, 183 Gabon, 73-74 Germany, 77 Honduras, 72 impacts, 69, 72-74, 94 inclusion of gender equality, 183 Indonesia, 74 Latin America, 76 Latvia, 77 Malaysia, 340 Mexico, 75, 84

Performance Measures, 67 plantation forests, 76 Russia, 74, 77 Sweden, 77-78 Tanzania, 73 tropical forests, 64 Uganda, 90 United Kingdom, 77 United States of America, 77, 100, 340 Certification Watch, 90 Chain of Custody Certification, 68 Chapela, Francisco, 371 charcoal Africa, 211 Central African Republic, 211 contribution to household income, 34 Democratic Republic of Congo, 128, 130 Eritrea, 215 future demand in Africa, 211 illegal logging, 197, 203 illicit exports from Somalia, 213 illicit taxing, 213 Liberia, 356 Mali, 211 role in deforestation, 115 Somalia, 211, 215 Sudan, 211 Tanzania, 117-118 charcoal production by terrorist groups, 211 chemicals, in forestry, 95 Chile certification, 71 forest utilization, 233 Sistema Chileno de Certificación Forestal, 71 China China Forest Certification Council, 378 community ownership of forests, 279 hongmu, 205 illegal logging, 217 Indigenous peoples, 281 market for illegal logs, 50 packaging paper production, 237 payment for ecosystem services, 140, 159 Pingxiang, 205 price of rosewood, 206 Sloping Land Conversion Programme, 149 Three Gorges Dam, 38 wood imports from Russia, 217

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

### 388 INDEX

CIFOR. See Centre for International Forestry Research circular bioeconomy, 231, 255 CITES. See Convention of International Trade in Endangered Species of Wild Fauna and Flora civil society and the Forest Stewardship Council, 62 concerns about carbon offsets, 47 concerns about ESG issues, 331 in environmental decision-making, 309 in Indonesia, 381 need for education, 23, 274 in Peru, 314, 324 policy reforms in forestry, 167 relations with industry, 84 role in governance, 174 role in Indonesia, 275 solving wicked problems, 34 Clean Development Mechanism, 109, 139 clientelism, 159 climate change Amazonas government, 122 and disturbances, 36 and forest health, 11 and forestry crime, 197 and forests, 43-44, 52, 167, 349 and governance, 2 and human rights, 305 and the bioeconomy, 251 and tropical forests, 42 cattle, 219 deforestation, 39, 43, 197 forest-based mitigation, 43 forests as a solution, 25 gender issues, 182 illegal deforestation, 219 mitigation by forests, 43 multi-stakeholder processes, 303 SDG 15.5 soy production, 219 Climate for Ideas, 89 cloud forest, 38, 160 cloud formation, and forests, 44 Coalition for Rainforest Nations, 109 coffee and gender, 186 arabica. 42 certification of organic, 186 cooperatives run by women, 186

Kenya, 186 sustainable production, 311 Uganda, 186 COHARYIMA, 314 collaborative forest management participation by women, 177 collaborative rationality, 17 collective action by communities, 278 by women, 22 capacity, 284 cooperatives, 187 disincentives, 169 enabling actions by government, 284 exercising rights, 284 gender equality, 188 job creation, 152 payments for, 151 payments for ecosystem services, 147 collective decision-making, 7, 16 collective forest management facilitating mechanisms, 293 social learning, 179 collective ownership, 280, 307, 377 barriers, 292 collective resource management, 178 collective strategy importance of leadership, 18 collectively-owned forests, 8 Colombia, 207-210 Amazon, 207 cattle, 209 deforestation, 207, 209, 225, 288 Guardians of the Forest, 208 illegal logging, 207 Indigenous territories, 289 payment for ecosystem services, 149 recognition of Indigenous peoples, 281 Commission on Crime Prevention and Criminal Justice (CCPCJ), 224 commodities as cause of deforestation, 38 commodity supply chains and deforestation, 49, 51, 183 common property, 22, 36, 169, 273, 275 community forestry and biodiversity, 290, 295, 366-367, 372-373 and capacity building, 291 and carbon, 282

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

INDEX 389

and deforestation, 288-289 as a result of decentralization, 16 benefit-sharing plans, 370 Cambodia, 292 Cameroon, 282, 292 capacity building, 370 concessions, 129 Democratic Republic of Congo, 282 donor funding, 280 Gambia, 282 good governance, 293 Guatemala, 281, 295 Honduras, 281, 295 income, 290 India, 171, 281 institutions, 171, 177 legal frameworks, 354 Liberia, 25, 354, 366, 382 management capacity, 371 Mexico, 280-281, 292, 295 Nepal, 178, 281, 292, 294 Nicaragua, 292 organized crime, 291 policies, 278, 285, 287, 291-292, 294-295 problems, 24, 366 recognition by government, 292 social capital, 291 social outcomes, 290 Tanzania, 114, 116, 282 community forests and carbon emissions, 283 support from donors, 292 community land ownership rights exclusion of women, 173 compliance incidents, 347 compliance, normative forms of, 13 Congo Basin biotic pump theory, 39 carbon storage, 43 certification, 72 REDD+, 129 woodfuel and charcoal, 211 Conservation International, 310, 313 contested institutions, 108 contested lands, 264-265, 267, 272, 314 contested policy process, 2 Convention on International Trade in Endangered Species of Wild Fauna and Flora, 202-203, 359

conversion of forests, 36, 38, 69, 80, 90 of peatlands, 40 corporate social responsibility, 62 corporations deforestation-free supply chains, 51 corruption and environmental crime, 202 and fragmentation in governance, 22 and illegal logging, 215 and inequality, 379 and REDD+, 110 Brazil. 122 criminal networks, 224 Democratic Republic of Congo, 128, 134 in forest governance, 41 in forest policy-making, 5 in forest sector, 383 Indonesia, 41, 50, 275 Peru, 310 REDD+, 134 Tanzania, 113 in timber industry, 122 Costa Rica Coalition for Rainforest Nations, 109 payment for ecosystem services, 139, 150, 153, 157 Cote d'Ivoire illegal rosewood harvesting, 207 crime forest-related, 49 criminal networks and forestry, 202 criteria and indicators of sustainable forest management, 341, 378 of sustaonable forest management, 342 Cross Laminated Timber, 239 customary governance, 128 customary law, 357 customary laws recognition in REDD+, 181 customary rights, 128 customary tenure, 281 Czech Republic Hnutí DUHA, 89 decarbonisation, 47, 332, 338

decentralization and deforestation, 110

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

#### 390 INDEX

decentralization (cont.) and gender equity, 168 and participatory forest management, 114 Democratic Republic of Congo, 129 if forestry, 174 Peru, 302 decision-making exclusion of women, 177 holistic, 13 involvement of women, 182 women's participation in, 171, 301 deforestation, 37, 74 abd gold mining, 323 agricultural expansion, 204, 323 Amazon, 121 and certification, 69, 73 and commodities, 38 and gold mining, 310 and illicit crops, 209 and REDD+, 110 Bolivia, 288 Brazil, 39-40, 74, 121, 288 by armed insurgents, 208 Cameroon, 74 carbon emissions, 43 charcoal production, 115 Colombia, 207-209, 225, 288 Democratic Republic of Congo, 128 failure to halt, 4 Gabon, 74 illegal, 41 impact on agriculture, 39 Indonesia, 41, 74 Malaysia, 41 Philippines, 41 risk to agricultural productivity, 39 SDG 15, 5 Tanzania, 113 degradation environmental, 6, 218 monitoring, 49 degradation, of forests, 37 Democratic Republic of Congo Bikoro, 127-133 charcoal, 128, 130 community forestry, 282 deforestation, 128 Equateur, 109 forest area, 128 Forest Code, 128

illegal charcoal production, 211 REDD+, 121-133 Denmark bioeconomy, 232 derived demand for forest products, 235 desertification, 5 SDG 15, 333 dipterocarp forests, 41 dissolving pulp, 238 Doe, Samuel, 357 Dogwood Alliance, 66 drought Brazil, 39 Indonesia, 269 Kenya, 151 Tanzania, 159 ECOCERT, 183 ecosystem approaches, 266 ecosystem management, 141 ecosystem services, 35, 140 value lost, 197 national accounting, 40 unpriced, 346 ecotourism community-based, 154 Ecuador certification, 71 import of illegally logged timber, 207 payment for ecosystem services, 139, 156 Socio Páramo programme, 152 El Niño drought, 270 elite capture, 153, 188, 267, 282 of REDD+ benefits, 181 employment forest sector, 221, 232 SDG 8, 6 employment, forest-based, 36-37 endangered species, 75 energy wood. See fuelwood engineered wood products, 237 Environmental and Social Management System (ESMS), 339 environmental crime convergence with other crimes, 201 value of. 199 Environmental Investigation Agency (EIA), 205

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

### INDEX 391

environmental management system, 67 environmental security, 223 environmental, social and governance issues, 328, 330-331, 334-335, 338, 343-344, 346 equatorial rainforest, 129 equity distributional, 171 ESG. See environmental, social and governance issues Estonia certification. 77 forest utilization, 233 ethanol, 239 ethical standards, 183 Ethiopia, 42 Euorpean Union VPA trade agreement system, 382 Europe certification, 76 European Union Forest Law Enforcement, Governance, and Trade initiative, 50 import of illegal tropical wood, 219 legal sourcing of timber, 341 Eyes on the Forest, 274 facilitation payments, 271 Fairtrade International, 183 FENAMAD, 313, 316 financial crimes in forestry, 221 Finland Äänekoski bioproduct mill, 249 biofore, 247 changes in R&D, 246 Finnish Forest Certification Scheme, 63 forest-based bioeconomy, 232 Suomen Luonnonsuojeluliitto, 89 fire regimes biodiversity, 159 Firestone rubber plantations, 356 firewood and gender, 171 contribution to income, 34 deforestation. 115 fish, from forests, 35 food security, 218 Forest Carbon Partnership Facility, 47, 110

forest certification. See certification forest cover, and albedo, 44 Forest Ethics, 66 forest industry changing patterns of investment, 246 forest institutions, 4 Forest Investment Program (FIP), 110 forest legality frameworks, 341 norms, 51 systems, 341 forest management assessing quality of, 70 forest management committees women's participation, 171 forest monitoring, 48 forest sector employment, 232 Forest Stewardship Council, 7, 62, 71, 183, 340, 342, 378 Argentina, 84 Corrective Actions, 75 gender discrimination, 186 forestry as an investment, 329 landscape-level, 15 managing for timber, 15 forestry crime, 197, 379 Forests of the World, 89 forests, as source of clean water, 36 Foundation for Conservation and Sustainable Development (FCDS), 2.08 FPIC. See Free, Prior and Informed Consent France, 37, 233 Les Amis de la Terre, 89 fraudulent reclaim of carbon credits in forestry, 221 Free, Prior and Informed Consent, 50, 185, 302, 308, 322 fuelwood, 211-215 and biodiversity conservation, 273 and illegal logging, 197 demand, 233 early demand, 37 Indonesia, 261 Liberia, 356 production, 234 regulation of harvesting, 204, 262

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

### 392 INDEX

Gabon certification, 73-74 deforestation, 74 Gambia community forests, 282 illegal rosewood harvesting, 207 gender, 167-189 and coffee production, 186 and payment for ecosystem services, 158 asymmetries in forest management, 173 discrimination, 176 employment, 36 equality, 167 equality and environmental outcomes, 172 equality and REDD+, 180-182 inequality, 35, 130, 167, 170 norms, 184 gendered institutions, 170 genetic improvement, 345 Genetically Modified Organisms (GMOs), 69,95 Germany certification, 77 early forest management, 37 financing reduced deforestation, 208.307 forest utilization, 233 Ghana illegal rosewood harvesting, 207 Global Bioeconomy Summit 2015, 231 Global Forest Watch, 48, 274 global forests convention, 45 Global Impact Investor Network's (GIIN) Impact Reporting Investment Standards, 343 Global Reporting Initiative (GRI), 343 Global Witness, 358, 361 governance, 5-8 board diversity, 347 collaborative, 3, 17 decentralized, 7, 15 definition. 7 effectiveness, 272 multi-stakeholder, 15 of international forestry investment, 328, 334 networked. 13 non-state market-driven, 62 participatory, 3, 8, 12, 15 participatory development, 305

polycentric, 16 private actors, 3 regimes, 174 shared, 15 government agencies inability to make decisions, 274 graphics paper future demand, 237, 247, 252 global demand, 235 production, 246 UPM, 246 Green Climate Fund, 47 Greenpeace, 51, 66, 89 Guatemala community forest enterprises, 281 community forestry, 295 community forests, 281, 288 Maya Biosphere Reserve, 291 Mayan Biosphere Reserve, 291 habitat connectivity, 337 High Conservation Value forests, 67, 69, 77 - 78Hnutí DUHA, 89 Honduras certification, 72 community forestry, 295 payment for ecosystem services, 155 hydrological services, of forests, 38 illegal deforestation, 197-198, 223 illegal logging Amazon, 207 and biodiversity, 197 and palm oil, 215 and tropical deforestation, 199 Brazil, 49, 121, 124, 198, 227 China, 217 Colombia, 207 control, 341 detection, 48 estimated value, 199 failure to halt, 4 Indonesia, 41, 50 mahogany, 49, 203 Peru, 313 ramin, 203 Romania, 218 rosewood, 197, 203, 205 shell companies, 203 Vietnam, 154

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

INDEX 393

Impact Monitoring and Measurement (IMM), 343 income diversification, 370 from agriculture, 130 from bushmeat, 35, 368 from charcoal, 130 from forests, 73 from non-timber forest products, 34 from payments for environmental services, 21 from wild fruits, 35 gender differences, 35 sources of, 124 income, forest-based, 37 India, 38 biodiversity, 290 community forestry institutions, 171 forest user committees, 175, 177 Joint Forest Management, 281 protected areas, 290 Indigenous people, 34 Indigenous peoples, 50, 271, 279, 281 allocation of land, 2 Amazon, 307, 314 forest land ownership, 175 Indonesia, 41, 281 land allocation, 282 land allocations, 288 Peru, 280, 308 reserved land in Africa, 281 respect for the land, 284 rights, 20, 51, 110, 283, 302, 357 use rights, 121 Indigenous Peoples, 279 Bolivia, 281 Brazil, 281 Nicaragua, 281 Panama, 280 Peru, 281 Indigenous rights Brazil, 50 Indigenous territories Australia, 290 biodiversity, 290 Brazil, 290 Canada, 290 carbon, 288 deforestation, 288-289, 295 Indonesia, 261-276 Bali, 41

Buano, 261, 273 certification, 74 Corruption Eradication Commission, 41, 50 deforestation, 41, 262 East Kalimantan, 34 forest fires, 39 Gunung Rinjani National Park, 270 Indigenous peoples, 281 Java, 41 Kalimantan, 73-74, 271 Lombok, 269 Ministry of Agriculture, 270 Ministry of Environment and Forestry, 263, 269, 276 Moluccas, 273 National Land Agency, 270 Nusa Tenggara, 269 oil palm expansion, 184 Peatland Restoration Office, 269 Riau, 268 Sumatra, 267 transmigration, 40 industrial plantations, 98, 268 in Sumatra, 268 inequality and governance, 169 inequity, 6, 11 informal logging, 313 institutional bricolage, 170 institutional investors, 336 integrated landscape approaches, 326 integrated landscape management, 337 Intergovernmental Panel on Climate Change, 43 International Civil Aviation Organization emissions reductions. 47 international development participatory paradigm, 306 International Finance Corporation Performance Standards for Environmental & Social Management, 339 International Integrated Reporting Council (IIRC), 343 International Labour Organization Covenant 169, 302 International Labour Organization Protocol 169, 280 International Model Forest Network, 312, 318

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

### 394 INDEX

International Standards Organization (ISO), 62 International Tropical Timber Organization (ITTO), 342 INTERPOL, 198, 223 Operation Log, 206 investment, 328-349 in forestry sector, 328 institutional, 328 in real assets, 330 risk management, 346 IONCELL-F, 239 ISO 14000, 63 ISO 14001, 339 ISO 9000, 63 Italy forest utilization, 233 ivory, 206 Japan, 37 legal sourcing of timber, 341 job losses due to import of illegally logged wood, 221 joint forest management Tanzania, 114 jurisdictional approaches to conservation, 266 iustice environmental, 189, 309 notions of, 21, 143, 149, 158, 160, 379 procedural, 325 Kehicap, 261, 273 Kenya coffee, 186 Maasai, 151 payment for ecosystem services, 151, 159 knowledge sharing platforms, 178 Korea, Republic of forest utilization, 233 Kyoto Protocol, 45, 109 labour conditions, 72 lactic acid, 239 Laminated Veneer Lumber, 239 land grabs Brazil, 40

land migrants, 130 land tenure lack of clarity, 267 land use and land-use change (LULUC), 302 landscape approach, 264, 266, 335, 337, 377 land-use planning and REDD+, 118 Latvia certification, 77 law enforcement and governance, 264 laws customary, 128-129, 357 leadership adaptive, 18 Leadership in Energy and Environmental Design (LEED), 62 learning definition, 4 learning organizations, 4 Legal Assurance System (LAS), 366 legal pluralism, 109 Les Amis de la Terre, 89 Liberia, 354-372 Aborigines Law, 357 biodiversity, 355 capacity building, 370 charcoal, 356 Community Forest Management Boards, 364 community forestry, 354, 382 Community Forestry Management Agreement, 360 Community Forestry Working Group, 360 Community Rights Law, 360 deforestation, 356 Forest Development Authority, 358 Forestry Department, 355 Land Rights Act (LRA), 367 Liberia Company, 356 Liberia Forest Initiative, 359 Liberia Forest Sector Project, 363 Liberia Mining Company, 356 Monrovia Declaration, 359 National Biomonitoring Strategy (NBS), 369 National Forestry Policy, 354 National Forestry Reform Law, 360 Nimba Nature Reserve, 359 Private Use Permits (PUPs), 365 Public Lands Law, 357

Colombia, 208-209

Indonesia, 271

Tanzania, 117

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

INDEX 395

REDD+, 363 Sapo National Park, 359 lignin, 239, 243, 250 lignocellulosic biomass potential products, 238 liquidation, of forests, 37 livelihoods and biodiversity, 262 and forest resources, 130 and forests, 167 and fuelwood collection, 261-262 and plantations, 338 and REDD+, 111, 118, 120 and tropical forests, 33 contribution of wild products, 34 diversification, 147 impact of criminal activity, 201 impact of elite capture, 169 impact of payment for environmental services schemes, 142, 144 impact of payments for environmental services schemes, 153 importance of agriculture, 370 need for reliable data, 286 partnerships with industry, 364 rural, 20 in rural China, 149 sustainable, 5 versus conservation, 23 local forest governance exclusion of women, 176 logger training and certification. 80 logging concessions, 128 Lovejoy, Thomas, 42 Madagascar, 43 capacity building, 153 illegal rosewood harvesting, 205 payment for ecosystem services, 153, 157 mahogany illegal logging, 49, 203 Malaysia deforestation, 41 Malaysian Timber Certification Scheme, 340 Mali illegal charcoal production, 211 illegal rosewood harvesting, 207

malnutrition, 73

management adaptive, 13 mangrove forests, 35-36 maps contested realities, 265 materiality thresholds, 347 Mauritania illegal rosewood harvesting, 207 Mauritius as tax haven, 217 medicines, from forests, 35, 43 Mendes, Chico, 280 Meridian Institute, 67 Metsä Group Äänekoski bioproduct mill, 249 Mexico certification, 75, 84 community forest enterprises, 281 community forestry, 294-295 community forestry policies, 285 community forests, 280-281 community ownership of forests, 279 deforestation, 73 eiidos, 281 Mexican System for Forest Certification, 84 Oaxaca, 154 payment for ecosystem services, 139, 150, 158 payment for hydrological services, 154, 160 payments for carbon, biodiversity and agro-forestry, 151 recognition of Indigenous peoples, 281 support for community forests, 292 Veracruz, 155, 160 mining and deforestation, 121, 303, 310, 315, 323 Ministerial Conference on the Protection of Forests in Europe, 63 miombo forests, 113 modular construction, 239 Moluccas Buano, 261 Monarch, Black-chinned, 261 money laundering in forestry, 221 Montreal Process. 342 Morocco women's argan cooperatives, 187

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

### 396 INDEX

motivation crowding-in, 155 multi-stakeholder dialogues, 274 multi-stakeholder fora, 301–302 multi-stakeholder processes, 302

nanocellulose, 243 national security, and forests, 41 national statistical accounts, 40 natural capital, 231 natural heritage planning and certification, 80 Nepal community forestry, 294 community forestry institutions, 171 Forest Stewardship Council, 186 forest user committees, 177 Indigenous peoples, 281 support for community forests, 292 Netherlands Centre for Indigenous Peoples, 89 networks collaborative, 17 New Forests, 344 New York Declaration on Forests, 1, 6 New Zealand forest utilization, 233 forest-based bioeconomy, 232 Nicaragua payment for ecosystem services, 149.156 recognition of Indigenous peoples, 281 support for community forests, 292 non-timber forest products, 34 role of women, 182 norm cascades, 49 norm shifts, 49-51 Norway Borregaard pulp mill, 250 financing reduced deforestation, 114, 208, 307, 363 oil palm expansion, 354 Kalimantan, 271 oil palm plantations, 269 old growth forests, 70 and certification. 80

and certification, 80 ombrophyllous forest, 122 orang-utan and oil palms, 271 packing papers and board global demand, 236 palm oil, 271 palm oil sector gender imblances, 184 Pan European Forest Certificate Council, 340 Panama recognition of Indigenous peoples, 280 Pan-European Forest Certification system, 63 paper products laundering of illegal tropical wood, 198 Papua New Guinea Coalition for Rainforest Nations, 109 Indigenous peoples, 281 Páramo, 159 Paris Agreement, 1, 6, 44, 46, 49, 208, 236, 253, 305, 328, 332-333 participatory forest management (PFM), 114 participatory mapping, 133 participatory processes exclusion of women, 176 Partnership Africa Canada, 358 path-dependence, of political institutions, 4 patronage in forest institutions, 267 payment for ecosystem services, 108, 139 definition, 140 inequality of access, 156 objectives, 140 payment for environmental services. See payment for ecosystem services peatland forests drainage, 197 peatlands conversion to agriculture, 40 deforestation, 219 peat-swamp forests, 267 Peru, 301-325 Alto Mayo Landscape Initiative, 311 Alto Mayo Protected Forest, 310 Amarakaeri Communal Reserve, 314-315 Amazon, 24, 303, 310, 318, 381 decentralization, 308 deforestation, 74, 302 Forestry and Wildlife Law, 309 General Law of the Environment, 308 governance, 307 Huayabamba Abiseo Model Forest, 312

illegal logging, 313

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

INDEX 397

import of illegally logged timber, 207 Indigenous communities, 307 Law of Prior Consultation, 302, 308 Madre de Dios, 303, 310, 314, 322 Madre de Dios Territorial Reserve (MDTR), 316 Manu National Park, 315 Ministry of Agriculture, 309 Ministry of Culture, 316-317 Ministry of the Environment, 309 multi-stakeholder processes, 302 National Environmental Policy, 309 National Service of Natural Protected Areas, 311 Permanent Production Forests, 309 recognition of Indigenous peoples, 281 REDD+, 302, 308, 314 Rio Abiseo National Park, 312 San Martin, 303, 322 timber laundering, 207 petrochemicals, 240 Philippines deforestation, 41 plantation forests, 235 certification, 76 plantations, 337 Burkina Faso, 172 policy, 1-5 definition, 2 forest. 3 policy pathways, 2 policy process, 2 politics of urgency, 12 pollination, 36 Portfolio Decarbonization Coalition, 332 poverty, 5 and forests. 167 poverty alleviation and REDD+, 111 poverty reduction and payments for ecosystem services, 148 power inequality, 306 power relations and payment for ecosystem services, 150 power, use of, 13 precautionary principle, 95 precision management systems, 345 private actors. 3 producer organisations, 370 product diversification

bioproducts, 247 UPM Company, 247 production possibility frontiers, 253 productivity gains in forestry, 345 Programme for the Endorsement of Forest Certification (PEFC), 62, 340 property inheritance, 357 property rights, 110, 112 public spaces exclusion of women, 176 Rainforest Alliance, 317 ramin illegal logging, 203 rate of return versus level of risk, 348 REDD+, 47, 108-135, 139, 180-181, 264, 379 Brazil, 121-127 Democratic Republic of Congo, 121-127 Tanzania, 113-121 regulatory capacity, 362, 365 renewable diesel, 239 rent seeking in forest institutions, 41, 267 rent-seeking behaviour, 41 reputational damage, 348 resins, 35 respiratory infections, 73 responsibility nexus, 11 responsible investment, 331 RHIPTO centre (Norway), 198 rights bundle of, 283 different forms of recognition, 283 of local communities, 36 rights-based approach to development, 305 riparian zone protection, 337 risk of false assurance, 11 Romania illegal logging, 218 rosewood illegal logging, 197, 203, 205 Round Table on Sustainable Oil Palm (RSPO), 184, 272 roundwood global demand, 233, 235, 251-252 production, 233 roundwood, industrial

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

### 398 INDEX

roundwood, industrial (cont.) demand, 233 demand in China, 235 production, 233 rubber, 35 rubber plantations, 122 Russia certification, 74, 77-78 conservation of biodiversity, 78 forest utilization, 233 Rwanda payment for ecosystem services, 155.158 Saudi Arabia import of illegal charcoal, 213 sawnwood global demand, 235 scientific forestry versus social processes, 264 SDG. See United Nations Sustainable Development Goals securities fraud in forestry, 221 Senegal illegal rosewood harvesting, 207 SERNAMP, 315 shea butter, 187 Burkina Faso, 187 shell companies in forestry, 221 Sierra Club of British Columbia, 122 Sirleaf, Ellen Johnson, 360 skid trails, 73 slash and burn shifting cultivation, 130 smallholders rights, 110 social capital, 278 social exclusion, 173 social learning, 178 social license, 348 social movements, 279 social norms, 170 effect of caste, 178 male bias, 177 social-ecological systems, 144 Somalia illegal charcoal production, 211 South Africa Working for Water programme, 152 soy production Brazil, 40 soy-bean production and deforestation, 38, 40, 121, 219 Spinnova, 239 stakeholders conflicting values, 263 state forest institutions, 266 subsistence consumption, 36 succinic acid, 239 Sudan illegal charcoal production, 211 Suomen Luonnonsuojeluliitto, 89 supply chain timber, 341 transparency, 341 supply chains, 74 Sustainability Accounting Standards Board (SASB), 343 sustainable development, 5, 332 Sustainable Development Goals. See United Nations Sustainable Development Goals sustainable forest management certification, 59 criteria and indicators, 69 Sustainable Forestry Initiative, 7, 71, 340 Fiber Sourcing, 68 state implementation committees, 80 Sustainable Landscape Investment, 329-330, 344, 349, 382 sustainable yield, of forests, 37 Sweden, 233 certification, 77 changes in R&D, 246 conservation of biodiversity, 78 Forest Stewardship Council, 78 forest-based bioeconomy, 232 national forest inventory, 78 swidden agriculture, 35 systems-based thinking, 13 tall oil, 239 Tanzania

certification, 73 charcoal, 117–118 community forestry policies, 285 community forests, 282 deforestation, 113, 115 Eastern Arc mountains, 115

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

INDEX 399

Kilosa, 115 MJUMITA - the Tanzania Community Forest Network, 116 National Land-use Commission, 118 payment for ecosystem services, 139, 152, 159 Payments for Watershed Services programme, 153 property rights, 114 REDD+, 108, 181 Tarangire National Park, 152 villagization, 114 tax fraud in forestry, 221 tax havens in forestry, 221 Taylor, Charles, 358 tenure customary, 174 terrorism Al Shabaab, 197 textiles, forest based, 243 Thailand bioeconomy, 232 Thatcher, Margaret, 42 timber concessions, 174 Timber Real Estate Investment Trusts, 329 Togo illegal rosewood harvesting, 207 tourism, nature-based, 42 toxic haze, from forest fires, 40 tragedy of the commons, 1, 16, 377 transfer mispricing in forestry, 221 tropical forests cabon storage, 43 USDA Forest Service, 65 Uganda adaptive collaborative management, 179 certification, 90 organic coffee production, 186 United Arab Emirates import of illegal charcoal, 213 United Kingdom bioeconomy, 232 certification, 77 Climate for Ideas. 89 financing reduced deforestation, 208 United Nations Collaborative Programme on

Reducing Emissions from

Deforestation and Forest Degradation in Developing Countries, 1, 6, 19, 46-47, 108 United Nations Conference on Environment and Development, 42, 44, 46, 63, 342, 376 United Nations Convention on Biological Diversity, 42, 45 United Nations Convention on Transnational Organized Crime, 223 United Nations Declaration on the Rights of Indigenous Peoples, 280 United Nations Food and Agriculture Organization, 48 United Nations Forum on Forests, 376 United Nations Framework Convention of Climate Change COP 11, 124 United Nations Framework Convention on Climate Change (UNFCCC), 42, 45, 139, 180, 332 Conference of the Parties Copenhagen, 268 COP 11, 108 COP 13, 109 COP 15, 110, 268 United Nations General Assembly, 42 United Nations Office on Drugs and Crime, 198 United Nations Security Council, 358 United Nations Sustainable Development Goals, 1, 5-6, 33, 236, 253, 269, 328, 332-333 United States as colonial power, 356 best management practices, 71 Dogwood Alliance, 89 investment in forestry, 328 legal sourcing of timber, 341 Woods Hole Research Center, 109 United States of America certification, 77, 100 universal owners, 328, 331 UN-REDD, 129 UN-REDD programme. See United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries

Cambridge University Press 978-1-108-47140-4 — The Wicked Problem of Forest Policy Edited by William Nikolakis , John Innes Index More Information

### 400 INDEX

UN-REDD Programme, 110 United Nations Sustainable Development Goals, 333 UPM Company, 246 USA American Tree Farm System, 63 import of illegal tropical wood, 219 Sustainable Forestry Initiative, 340 USAID, 312, 360 Forest Incomes for Environmental Sustainability (FIFES), 363 People, Rules, and Organizations Supporting the Protection of Ecosystem Resources (PROSPER), 362 valuation, of forests, 4 vanillin, 250 Venezuela import of illegally logged timber, 207 Vietnam Ba Vi National Park, 156 illegal logging, 154 payment for ecosystem services, 139-140, 151, 154, 156, 158 REDD+, 182 rosewood trade, 205 village natural resource committee (VNRC), 118 vinblastine, 43 vincristine, 43 violence, in forests, 37 voluntary environmental programmes, 61 Voluntary Partner Agreements (VPA), 366

Walt Disney Company carbon bonds, 311 Warsaw Framework, 46 water and forests, 148 water supply, 218 wellbeing goals gender differences, 183 white-collar crime in forestry, 221 wicked problems definition, 8-10, 60 knowledge dimensions, 10 moral dimensions, 10 wild fruits Cameroon, 35 wildfire, 4 women marginalization, 167 wood construction, 243 wood fuel global demand, 235 wood panels global demand, 236 wood plastic composites, 239 woodfuel, 211 workforce safety, 346 World Bank FCPF, 129 Forest Investment Program (FIP), 110 World Wildlife Fund, 66 2050 Criteria, 335 New Generation Plantations, 338