

Index

Aarhus Convention (United Nations Economic Commission for Europe [UNECE] Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters), 161, 172 access and benefit-sharing (ABS) - equitable, 146, 350, 353 access without benefit-sharing (ABS), 147 accountability, 52, 57, 58-59, 120, 172, 278, 356 agricultural landscapes, 17, 33, 264-265, 269, 272, 274, 278-283, 351 agricultural policy, 269, 275, 277, 278, 282-283 agriculture, 266-268 agrihealth, 97 Aichi Biodiversity Targets, 229 Aichi Targets (ATs), 4, 17, 33, 44, 138, 161, 169, 221-222, 223, 225-226, 228, 229-230, 233, 264, cost of, 166 equitable management component of, 227-228 missed, 53 overview of. 4 transformative governance and, 230 amplification effect, 96 animal rights, 16, 76, 82, 165, 182-183, 184-185, 186, 191, 343, 344, 345, 346, 353, 357 academic debate about, 180-181 rights of nature and, 179, 192-194 rights-based approaches to, 354 animal welfare, 8, 165, 179, 182, 183-186, 190-195, 264, 282, 355 animal rights versus conservation and, 183 Anthropocene, 30, 96 anthropocentric, 16, 30, 34, 79, 104, 131, 179, 184-185, 186, 192, 195 anthropocentrism, 123, 125, 181, 346 architecture, 43, 128, 204, 274, 294, 301, 304, 305, 306, 307 ArcticZymes / Biotec Pharmacon, 212, 213 area-based management, 18, 314, 322, 323, 329, 330, 332 Atrato River, 35 Āyurveda, 98

benefit-sharing, 18, 138, 147-149, 151, 156, 172, 202, 204, 314, 321, 328-330, 332, 356 Benguela Current Commission, 324-327 Benguela Current Convention (BCC), 324 biocultural diversity, 14, 26, 31-34, 37 biodiversity, 26-28, 122, 137, 157-158, 255-260, 270, 273-274, 277-278, 294-296 financeable, 121-126 governing in the city, 301-304 institutional capacity and, 276-277 urban, 299-301 biodiversity and health, 93, 97-98 biodiversity conservation, 10, 13, 26, 29, 37, 56, 75-76, 79, 82, 115, 117-118, 123, 138, 161, 201, 223, 224, 234, 235, 236, 244–245, 247, 250-251, 259, 268, 270, 274-275, 278, 280, 296-297, 313, 321, 324, 328, 331, 342, 354, 356 agricultural landscapes and, 17 Aichi Targets (ATs) and, 161, 222, 264 application of synthetic biology and, 143 biocultural diversity and, 33 biological diversity and, 27 BPI and, 270 business case for, 120 CBD objectives of, 47 Earth jurisprudence for, 187 economic importance of, 118, 229 financing instrument for, 124, 128 funding gap and, 116, 118, 121 incentives for, 204 influence of cities on, 51 management plans for, 274 objectives of, 44-47, 224 prioritizing, 77, 79, 83 promotion of, 265 public finance for, 119 reason for failing objectives of, 164 resources for, 15 threat to, 272 transformative change and, 13, 69, 75, 78, 85, transformative governance agenda, 230

361



362 Index

biodiversity finance, 15, 124, 126-130, 167, 168, 170, 355 assessment of, 120-121 developments in, 116 diversity of instruments and, 116-121 literature about, 167 sources and needs, 119 transformative change and, 121 transformative governance and, 115-121 unlocking, 118-120 biodiversity govern, 159 biodiversity governance, 3-5, 9, 14, 14, 18, 25, 26, 28, 29, 31, 34, 36–37, 43, 44, 47, 50, 51, 55–56, 60, 76-77, 84, 93-94, 108, 108, 115, 120, 123, 130, 137-142, 150, 151, 155-159, 164, 165, 166, 169, 170, 179–180, 184, 188, 194–195, 200, 274, 304, 341-357 external actors and, 164 justice and equity in, 157, 159-163 transformative, 13, 15, 18, 26, 35, 51, 85, 122, 171-173, 343-344 urban, 18 biodiversity health, 27, 94-97 biodiversity impact, 17, 140, 244-246, 253-259, 267, 281, 357 biodiversity intactness, 27 biodiversity offsets, 119, 122, 124, 129 Biodiversity Policy Integration (BPI), 14, 17, 264-265, 269, 270-278, 282 framework for, 269-273 biodiversity-loss-as-material-risk, 130 bioinformatics, 15, 137-138, 146, 353 biological diversity, 3, 27, 31-32, 44-47, 139, 141, 151, 296 biopiracy, 202, 203, 210, 212, 214 bioprospecting, 16, 200-202, 211, 215, 328, 350, 351, 353 ABS and, 204, 214 corporate strategies and, 210 governing, 206-210 in the polar regions, 205–210 Norway and, 208-210 Novozymes', 211, 214 bioprospectors, 208, 211, 214, 215 biotechnology, 137, 143-144, 145, 201, 205, 207, 208, 215 black-boxes, 37 blended finance, 127, 130 buen vivir, 34, 35, 123, 186, 345, 346 capitalism, 9, 247, 249, 250, 346 carbon dioxide removal (CDR), 15, 137, 139 Cities4Forest initiative, 305 CitiesWithNature, 305 Clearing House Mechanism, 207, 215 climate change, 6-7, 17, 28, 50, 55, 58, 82, 94, 137, 139-140, 155, 247, 266, 280, 293, 294, 295, 297,

298, 299, 304, 306, 315, 317, 321, 330, 331, 343, 350, 351 deep ocean environments and, 317 collaboration, 26, 50, 70, 83, 98, 102, 107, 109, 123, 143, 185, 191, 195, 203, 208, 211, 212, 214, 274, 303, 322, 330, 331 Communities of Practice, 109 complex adaptive systems approach, 103 complexity, 15, 36, 53, 83, 104, 109, 126, 148, 151, 155, 224, 229, 237, 307, 327 structural societal drivers, 297 system/systemic, 68 compliance, 46, 53-55, 58, 149, 172, 203, 210, 211, 232, 234, 273, 354, 356 lack of, 150 conservation, 44, 45, 47, 49, 51, 52, 191-192, 233-237, 274-276 conservation medicine, 97 conservation strategies, 28, 37 conserved areas, 17, 168, 221, 222-225, 226, 230, 233-236, 237, 353 designation of, 228-229 Convention on Biological Diversity (CBD), 3, 44-47, 52-53, 59-60, 137, 156, 167, 221, 264, 354 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 49 Convention on the Conservation of Migratory Species of Wild Animals (CMS), 3 Convention on Wetlands, the Convention on Migratory Species (CMS), 49 convivial conservation, 17, 35, 244-246, 249-253, 255, 257, 258, 345, 354 BICs as a tool in, 259-260 transformative governance of, 255 COVID-19, 4-5, 15, 93-94, 102, 103, 104, 106-108, 115, 191, 200, 315, 350 cultural landscapes, 29, 33-34 decision-making, 164-165 decision-making (biodiversity) - justice and equity in, 163-165 determinants of health, 97 digital sequence information (DSI), 15, 137, 146-149, 204, 206, 207, 209, 211, 215, 353 dilution effect, 96, 103 early warning and prevention, 107 Earth jurisprudence, 16, 186-190, 192 ecocentrism, 35 EcoHealth, 97, 109 ecologically or biologically significant marine areas (EBSAs), 322, 326 ecosystem services, 6, 14, 26, 29-31, 33, 37, 94, 99, 122, 125, 126, 170, 188, 190, 222, 331 Edinburgh Process, 51, 304, 351 emerging infectious diseases, 93, 97, 104, 107

enabling environment, 106, 109



Index 363

innovative financial instruments, 15, 130, 355 environmental justice, 4, 156, 158, 162, 163, 251, 308, 343 Integrated Conservation and Development Projects environmental policy-making, 36 (ICDPs), 159, 171 integrative governance, 15, 15, 16, 50, 51, 55-56, 72, Environmental Reserve Quota, 123 enzymes (marine), 204, 205-206, 209-210, 212-214 79, 85, 97, 107, 116, 129, 130, 131, 179, 195, epistemic pact, 35 223, 236, 280-281, 283, 322-324, 330, 348-349, equity, 79, See also justice 355, 357 Escazú Agreement, 161 interdisciplinary, 102, 107, 146, 191 ethical and sociocultural valuations, 31 intergenerational justice, 158, 183, 346 experimentation, 12, 18, 59, 70, 224, 237, 294, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), 302-303, 304, 305, 307, 314, 332, 342, 349, 6, 31, 55, 93, 139, 190, 227, 244, 342 international institutions, 43, 48, 146 finance, 355-356 international law, 53, 141, 319, 327, 329, 349 finance (biodiversity) interspecies justice, 180, 193, 195 allocation, 167-168 effort-sharing, 167 just sustainabilities, 158 financeable objects, 122-123, 131 just transition, 163, 343, 347, 352-355 financeable' biodiversity, 121-126 iustice five freedoms, 183-186 corrective or remedial, 158 Free, Prior and Informed Consent (FPIC), 165 distributive, 16, 158, 164, 167, 173, 352 funding gap, 116, 118-120, 121 environmental, 163, 251, 308, 343 procedural, 16, 156, 158, 163, 164, 165-166, 168, gene drives, 15, 137, 138, 142-147, 150 352, 353 geoengineering, 137-138, 150-151 recognition, 16, 164, 352 climate-related, 15, 138, 139-142 justice and equity, 16, 18, 79, 86, 94, 103, 157, Global Biodiversity Framework (GBF), 347-348, 355 161-163 global health, 97 theories of, 157-158 Global Health Ethics, 103 transformative biodiversity governance, 155-157 governance, 7-12, 50-52, 56-57, 68-69, 79-86, 105, 106, 168-173, 228-230, 249-253, 345-351 land use change, 266, 281 transformations and transitions and, 67-68 large marine ecosystem (LMEs), 323 transformative, 70 Local Biodiversity Strategies and Action Plans transitional, 69-70 (LBSAPs)., 294 transnational, 72 governance for transformation, 305, 308 mainstreaming, 4, 16, 47, 49, 50, 51, 52-53, 54, 59, 98, 120, 179-180, 303, 355-356 green bonds, 117, 122, 126 Green Factor Tool, 298 justice and equity in, 170-171 marine biobanks, 202, 209 green gentrification, 300 green prescription, 94 marine biodiversity, 18, 147, 314, 323, 330, 350 causes of, 314 hard law, 53 impact of fishing on, 315-316 health, 99-102, 103-104, 105 international instruments on, 313 human, 102, 104-105 loss of, 314-315 threats to, 318-319 integrative concepts of, 97 marine genetic resources, 200-201, 205, 207, Health in All Policies, 97 health pluralism, 97 211, 215 Health Promotion, 94, 97 marine protected areas (MPAs), 117, 223-224, biodiversity conservation, 56 226, 321 human-natural systems, 37 marine resources, 315-316 Marine Spatial Management and Governance Project illegal, unreported and unregulated fishing (IUU), 315 (MARISMA), 326 marine spatial planning, 322, 324, 325, 326-327, 332 implementation, 53-55, 57-59, 172 Indigenous and Community Conserved Areas market-based instruments, 116, 120, 344, 356 (ICCAs), 169 markets, 13, 50, 51, 84, 116, 117, 188, 248, 252, 258, Indigenous peoples and local communities (IPLC), 266, 274, 278, 281 150, 162, 329-330 medicines, 6 Mother Nature, 36 justice and equity, 34, 156, 276, 321



364

multi-functionality, 278, 300
multi-level governance, 59, **61**, 349
multinational corporations, 201, 214, 215
multi-perspective scenario exercises, 37
multispecies justice, 158, 195, 346
nature, 4, 6
definition of, 25, 26, 28, 30, 31, 34, 36, 94, 99
definitions of, 14

Nature Futures Framework, 36 nature-related health risks and benefits, 109 nature's contribution to people, 295, 299, 300, 306 nature-as-natural-capital, 116, 118, 122, 126

nature-as-natural-capital, 116, 118, 122, 126 nature-based solutions, 295, 297, 300–301, 303, 352 neoliberal/neoliberalism, 17, 50, 56, 57, 72 networking, 51 non-anthropocentric, 192 novel ecosystems', 299

Novozymes, 210-212

outcomes, 233

objectification, 122
ocean governance, 18, 314, 319–322, 323, 327, 329–330, 350
need for, 318
transformative, 323–324, 327–328
One Health, 15, 93–102, 105, 108–110, 191–192, 350 challenges in, 102–104
COVID-19 lessons and, 106–108
methodological gaps in, 106
understanding concept of, 94–97
openness, 107, 109, 304
other effective area-based conservation measures
(OECMs), 33, 168, 221

Pachamama, 34, 35, 186 pandemic, 4, 5, 15, 93-94, 102, 103, 104, 107, 108, 155, 200, 245, 259, 350, See also COVID-19 patent applications, 148, 201, 203, 205, 206, 211, 214 Payments for Ecosystem Services (PES), 117 planetary health, 97, 98 Planetary Health ethics, 103 pluralism, 14, 25, 26, 37, 103, 115, 125, 344-345 pluralistic approaches, 14, 25, 37 polar regions, 200-202, 205-206, 207, 208, 351 policy coherence, 47, 50, 275-276, 349 policy learning, 282 policy mix, 128-129 pollution, 316-317 polycentric governance, 223 practical implementation, 109 preparedness, 107, 109 primary health care, 94, 101 procedural justice, 168, 173 protected areas, 224, 230

Aichi Target 11, 169, 226, 236

Index

qualitative descriptions, 36 quantitative descriptions, 36

rules-in-use, 128, 129, 131

REDD+, 122, 128, 132, 228–229, 230–231, 236 reductionist approaches, 14, 37
Regime Complex, 14, 43, 47–50, 55–56, 349 regional fisheries management organizations (RFMOs), 323 resilience, 70, 104 de-growth, 85, 106 ecosystem services, 229 resources, budget, 166–167, 277 restoration, 235, 297–299, 301, 305, 308 rewilding, 33, 183 rights of nature, 14, 16, 26, 34–35, 37, 76, 78, 179–180, 183, 186–191, 192, 194, 343, 345–346, 353, 354, 357 risk management, 126, 145

salutogenesis, 99, 101, 104 scenarios, 7, 14, 26, 36, 70, 139, 280 scientific analysis, 108 silo/silos, 3, 55, 107, 109, 300 singularization, 122, 124 social exclusion, 303, 308 societal deliberation, 108 soft law, 44, 47, 54, 57 soft skills, 109 solar radiation modification (SRM), 15, 139 sponge city, 303 Structural One Health, 99, 100, 107, 109, 350 structural societal drivers, 15 Sustainable Development Goals (SDGs), 4, 5, 56, 74, 77–78, 102, 172, 249, 265, 313, 319, 347, 357 Sustainable Ocean Initiative (SOI), 324, 331 sustainable urban drainage, 303 sustainable use, 3, 30, 33, 45, 47, 51–52, 56, 60, 74, 116, 137, 138, 144, 169, 172, 231, 296, 325, 328-330, 331-332, 344, 350, 356 synthetic biology, 15, 137-139, 142-147, 150-151, 353

transdisciplinary, 10, 15, 18, 59, 69, 72, 79, 85, 102, 107, 109, 115, 121, 122–123, 125, 126–127, 353, 357
transformative biodiversity governance, 94
transformative change, 3, 4, 13, 14–15, 16, 18, 36, 43, 52, 56, 60, 70, 72, 75, 77–78, 84–86, 99, 103, 104, 105, 109, 115–116, 120, 138, 144, 155, 157, 162, 163, 169, 172–173, 187, 195, 201, 221, 222, 237, 244–246, 253, 259, 265, 294, 307, 313–314, 328, 329, 341, 342–343, 346–347, 356 biodiversity finance and, 121 biodiversity loss and, 6–9 governance and, 7–12, 68–69, 84–85, 106 integration and reflection, 67–68

traditional knowledge systems of medicine, 98



Index 365

need for, 156
prioritization and, 67–69
transformative governance, 9–12, 84, 149–151
justice and equity in, 161–163
role of science in, 82–85
transnational governance, 18, 50, 72, 294, 352
transnational networks, 307, 308, 352
transparency, 14, 37, 52, 57, 58, 59, 167, 207, 322, 330, 347, 348, 352, 356
truth-claims, 37

transparency, 14, 37, 34, 37, 36, 39, 167, 207, 322, 330, 347, 348, 352, 356
truth-claims, 37

UN Declaration on the Rights of Indigenous Peoples (UNDRIP), 161, 193
UN Fish Stocks Agreement (UNFSA), 319
UN Framework Convention on Climate Change equity in, 142, 156, 228, 265
United Nations Convention of the Law of the Sea (UNCLOS), 319
urban biodiversity governance, 294, 301, 303, 305, 306, 307, 352
urban nature, 18, 99, 294, 295, 297, 298–299, 300–301, 302–304, 307–308, 352
urbanisation, 295

valuation, 31, 57, 94, 123, 125, 126, 130, 131, 190, 249 value pluralism, 14, 26, 115, 125 value plurality, 345 values instrumental, 14, 34, 36, 122, 346 intrinsic, 33, 125, 344 relational, 26, 33, 344 whole-of-government approach, 348-351 whole-of-society approach, 120-121, 131, 347-348, 351-352, 355 wilderness, 14, 26, 28-30, 32, 33, 37, 248, 293 wilderness protection, 33, 249 World Health Organization (WHO), 93, 147, 191, World Organisation for Animal Health, 98, 185, 193, 350 worldviews, 25, 31, 34-35, 37, 98, 103, 155, 158, 162, 332, 344, 346

zoonoses, 200