Reproduced from Fisheries Exploitation in the Indian Ocean: Threats and Opportunities
edited by Dennis Rumley, Sanjay Chaturvedi and Vijay Sakhuja (Singapore: Institute of Southeast Asian Studies,
2009). This version was obtained electronically direct from the publisher on condition that copyright is not infringed.
No part of this publication may be reproduced without the prior permission of the Institute of Southeast Asian
Studies. Individual articles are available at < http://bookshop.iseas.edu.sq >

Index

Antarctica Abetz, Eric, 67 as global knowledge commons, Aboriginal Fishing Strategy, 147, 152-260 - 6553, 158 bioprospecting in, 256 aboriginal perspectives, 145-46 Antarctic, and relevance of Advisory Committee on the Convention on Biological Protection of the Seas, 35 Diversity, 255–57 Africa Growth and Opportunity Act Antarctic Treaty Consultative Meetings (ATCMS), 252-55, 263 (AGOA), 199 African-Asian Legal Consultative Antarctica Treaty System, see also ATS Committee, 108 provisions, 248-50 African, Caribbean, and Pacific Antarctic Bioprospecting Policy (ACP), 213 Regime (ABPORE), 14, 15, 247fisheries, and European Union, 49, 264 212 - 17Antarctic Cooperative Research sugar, 198, 221-22 Centre, 246 African Indian Ocean Commission, 61 antifouling measures, for ship hull, 234 African islands, 195 "Anything but Arms" initiative, 199 Africa, poverty alleviation, 59 aquaculture, 2, 11-12, 73, 154-57, 186, Agalega, 200, 222 305 Agulhas current, 42 bioinvasion in, 231-32 Ahamed, E., 340 global seafood supply through, 218 Alarm Shoals, 151 Aquaculture Master Plan, 219 Albion Fisheries Research Centre aquatic-based food chain, 13 Arabian Peninsula, 79, 123 (AFRC), 213 Ali, Karamat, 172 boundaries, 8 Arabian sea, 28-29, 34, 42, 170 Alliance for the Release of Innocent Fishermen (ARIF), 169 Arafura sea, 106 AMRAD Natural Products, 246 Archimedes Principle, 229 Andaman Sea, 79, 86, 88, 114, 125 archipelagic baselines, 115-16

Ardyaloon community, 157	Australian Aborigines, 141
artisanal fishing, 202-203, 282	political context, 146–47
by indigenous people, 142–45	see also indigenous people
artisan fishery, 184–85	Australian Centre for International
ASEAN Marine Region Strategy, 85	Agriculture Research (ACIAR),
Asia-Pacific Economic Cooperation	155
(APEC), 45	Australian Collection of Antarctic
Asia Pacific Fishery Commission	Micro-Organisms (ACAM), 246
(APFIC), 49	Australian Customs Service, 90
Association of Southern Ocean	Australian Exclusive Economic Zone,
Coalition (ASOC), 263	129
ATS (Antarctica Treaty System), 15,	Australian Fisheries Management
191–92, 242, 247, 251, 254, 257–58,	Authority, 90, 304
260–61, 263–65	Australian Quarantine and Inspection
Australia, 27, 47, 60–61, 80, 82, 85, 89–	Service, 90
90, 106	Australian Shelf, North-west, 42
ban on whale products, 59	Australian Shelf, West Central, 42
coastline, 313	
conservationist lobby, 65	В
federal policies, 63	ballast-free ship, 233
marine management, 314–16	Banc du Geyser, 182, 191
maritime surveillance, 128–29	Bangladesh, 25, 34, 75, 79, 318
native title, 147–52	boundary negotiations with India, 124
"new rules of engagement", 66-67	climate change, effect of, 336-37
Oceans Policy, 313–14	coastline, 112
"pseudo-conservationist", 62	ethnic homogeneity, 336
straight baseline claim, 115	straight baseline claim, 113, 119
submission to CLCS, 118, 132	unilateral claim, 119
treaty with France, 188	Bardi community, 155, 157
treaty with Indonesia, 126, 134	Bardi Jawi native title claim, 149–51
Australia-Indonesia fishing dispute,	barnacles, 14
63–64	baselines, 109-16, 122
Australia-Indonesia Security	see also straight baselines
Agreement, 64	Baselines of Maritime Zones Act, 114
Australia, Western	Basiron, Nizam, 15
fishing license, 68	Bassas da India, 121–22, 133, 180
indigenous fishing, 11, 141-42	"Bayan", 203
indigenous people, 143-47, see also	Bay of Bengal, 29, 34, 42, 79, 125, 165
Australian Aborigines	Bay of Bengal as a Large Marine
recent developments in, 157-58	Ecosystem (BOBLME), 7, 339
West Kimberly region 11 1/1 1/0	
West Kimberly region, 11, 141, 149,	legislative regime, 42–43

Bay of Bengal Development Buccaneer Archipelago, 149 Programme, 85, 311 Bumble Bee, seafood company, 226 Bay of Bengal Inter-Governmental Burma, see Myanmar Organization, members of, 311 by-catch, 57, 290, 299 Belize, 65 Berge, John, 233 "bichique", 186 Caddy, J., 51 Bigeye Tuna, 2, 57, 212-13, 284-85, Cape Leveque, 155 288-89, 293 Cape of Good Hope, 106 biodiversity, 4–5, 7, 9, 57 capture fisheries, 2 and climate change, 26-28 legislation for, 6 definition, 26 "Cash for Access", 214, 216 institutional aspects, 39-53 CBD (Convention on Biological bioinvasion, 13, 228, 230-32 Diversity), 4, 15, 26, 41, 253–54, 258, see also ship ballast 265, 271, 276, 299, 303, 309, 313 "biological diversity", 4-5 relevance for Antarctic, 255-57 bioprospecting, 14-15, 242 CCAMLR (Commission for the Antarctica, in, 256 Conservation of Antarctic Marine CCAMLR, relevance of, 250–52 Living Resources), 50, 91, 187, CRAMRA, relevance of, 250–52 189, 191–92, 248, 253, 311 bioprospecting, and relevance of, four phases of, 243 250 - 52geopolitics, 242-47 policy regime, in Antarctic, 247-49 CCLM (Committee on Constitutional and Legal Matters), 291 southern polar regions, in, 242-47 BioSearch Italia SPA, 244 CCSA (Conservation Council of biota, 14, 243, 246 South Australia), 305–306 biotechnology, 26, 242-43 CCSBT (Commission for the Blue Mud Bay, 152 Conservation of Southern Bluefin "Blue Revolution", 304 Tuna), 45, 47–48, 50, 52, 61, 66, "boat persons", 87 280, 311 Bombay High, oil spill, 28 CDD (Community-Driven Bonn Convention, 309 Development), 328 Brahmaputra, river, 34 CECAF (Committee for the Eastern Brazil, 27 Central Atlantic Fisheries), 49 Britain, 66 CEP (Committee on Environmental British Indian Ocean Territory (BIOT), Protection), 252-53 80, 116, 124, 130 Certain Maritime Arrangements in the Broome, 151, 153, 155 Timor Sea (CMATS), treaty, 126 Broome Aquaculture Centre, 157 Cerylid Biosciences, 246 Brue Reef, 151 Chagos Archipelago, 80, 106, 116, 123, Brundtland Commission, 308 Brundtland Report, 23, 308 Mauritius claim on, 124, 194

Charter of Economic Rights and	Kenya, 307
Duties of the State, 86–87	South Africa, 307
Chi Hing C. Cheng, 245	Cochrane, K., 51
Chile, 3	"cod war", 66
China, 3, 10, 27, 61, 64	Code of Conduct for Responsible
and Taiwan, 45	Fisheries, 41, 44, 50, 328
Chirac, President, 184	Cold War, 6, 21-25, 33, 35, 54
Chokyu Maru 38, 184	Colombia, 27
Christmas Island, 106, 130	Colombo harbour, 168
CITES (Convention on International	COM (Collectivité d'outre-mer), 178,
Trade in Endangered Species of	190
Wild Fauna and Flora), 65, 309-	Commission for the Conservation of
10	Antarctic Marine Living
CLCS (United Nations Commission	Resources, see CCAMLR
on the Limits of the Continental	Commission for the Conservation of
Shelf), 117–18	Southern Bluefin Tuna, see
climate change, 326, 338	CCSBT
and biodiversity, 26-28	Commission on the Conservation and
Bangladesh, effect on, 336-37	Management of highly Migratory
Indian Ocean Region, in, 25, 332-35	Fish Stocks in the Western and
climate justice, 332–35	Central Pacific Ocean (WCPFC),
CMS (Convention on Migratory	280
Species of wild Animals), 309	Committee for the Eastern Central
coastal communities, 32–33	Atlantic Fisheries, see CECAF
coastal fishing, 224	Committee on Environmental
coastal management, 33, 84, 319-21	Protection, see CEP
challenges, 312	Committee on Constitutional and
Kenya, in, 313	Legal Matters, see CCLM
of IOR, 306–08	Common Fishing Policy (CFP), 214,
South Africa policy, 312–13	216
see also ICZM	common heritage thesis, 24–25
coastal state claims, 117, 132	Common Market of Eastern and
coastal zone, 303, 312	Southern Africa (COMESA), 201
ecosystem in, 270	Common Zone of Exploitation, 79-80
industrialization, 30-31	Commonwealth Marine Areas, 313
urbanization, 30–31	Commonwealth Sugar Agreement,
Coastal Zone Inquiry, 146–47	see CSA
Coastal Zone Management Policy, 312	community-based fisheries conflict, 63
coastline	Community-Driven Development, see
Bangladesh, 112	CDD
developing states, of, 73	Comoros, 78, 88, 91, 122, 191, 195

archipelagic baselines, 116 Copenhagen Consensus Papers, 27 independence, 121 Coral Reef Degradation in the Indian Comoros Archipelago, 178, 180 Ocean (CORDIO), 310 conflict resolution procedures, 56, 65coral reefs, 168, 172, 175, 307, 332–33 67 in Southeast Asia, 326-27 conflict scenarios, 58-59 Cornell University, 231 Conservation and Management of Cotonou Agreement, 214, 221, 225 Straddling Fish Stocks and COVIPEMM, 181 Highly Migratory Fish Stocks, CRAMRA (Convention on the see CSFS Regulation of Antarctic Mineral Conservation Council of South Resources Activities), 248 Australia, see CCSA bioprospecting, and relevance of, "constitutional rectangle", 119 250 - 52continental shelf boundary, 79-80, 91, Creoles, 195–96, 201–202, 219 117 - 18"Creolization", 196, 221 Croker Island, 148-49 Convention for the Protection, Management, and Development CSA (Commonwealth Sugar of the Marine and Coastal Agreement), 198 Environment of the Eastern CSFS (Conservation and African region, 48 Management of Straddling Fish Convention on Biological Diversity, Stocks and Highly Migratory Fish Stocks), 41, 74, 95 see CBD Convention on Fishing Conservation Cunningham Point, 156 of the Living Resources of the customary fishing, by indigenous High Seas, 130 people, 142–45 Convention on International Trade in CZI (Coastal Zone Inquiry), 146–47 **Endangered Species of Wild** Fauna and Flora, see CITES Convention on Migratory Species of Dampier Peninsula, 149, 151, 155 wild Animals, see CMS Database of the European Patent Convention on the Continental Shelf. Office, 246 "dead zone", 2 Convention on the High Seas, 130 Declaration of the First International Convention on the Regulation of Forum of Indigenous Peoples on Antarctic Mineral Resources Climate Change, 336 Activities, see CRAMRA "deliberately conflictual states", 59 Convention on the Territorial Sea and Deutsche Sammlung von Contiguous Zone, 130 Mikroorganismen und Zellkulturen Convention, the 1982, 74-76, 81-82 GmbH, 244 see also UNCLOS developing states, coastlines of, 73 COPEMAY, 181 Diego Garcia, 123-24, 194

distant water fishing nations	"environmental costs", 56
(DWFNs), 16, 105, 127, 129, 281,	environmental degradation, 23
284, 306	Environmental Impact Assessment
distant water fishing states (DWFS),	(EIA), 250, 253, 256
210	Environmental Management and
Djibouti	Coordination Act (EMCA), 313
straight baseline claim, 113	Environmental Protection Act, 312
Doha Declaration, 221	Environmental Protection and
DOM (Département d'outre-mer),	Biodiversity Conservation Act
178, 190, 194	(EPBC Act), 313
dynamite, fishing, 33–34	"environmental refugees", 335
,	environmental security, 21–25, 28
E	Indian Ocean rim, 32–35
EAM (École d'Apprentissage	"environmentalism", 55–56
Maritime), 181	environmentally sustainable
Earth Summit, 23, 84	development (ESD), 306
East African Seas programme, 310	Eritrea, 10, 74
East Timor, 121, 125–26	Ethiopian biogeographic province, 27
East-West confrontation, 23	EU-ACP Agreement, 221, 225
Eastern Atlantic Ocean, 16	Europa Island, 121–22, 133, 180
Ecologically Sustainable Development	European colonizers, objectives of, 13
(ESD), report, 146–47	European Commission (EC), 222
"economism", 55	European Common Market, 198
ecosystem	European Community, 48, 61, 91
coastal zone, in, 270	European Economic Community
fisheries, and, 31-32	(EEC), 213
management, 82	European Union (EU), 3, 13, 306
Ecuador, 27	ACP fisheries, and, 212–17
EEZ (Exclusive Economic Zone), 12,	banning imports, 318
24–25, 29, 40–43, 57, 59, 61, 68,	Mauritius sugar export to, 198, 221
74, 76, 78, 80, 86, 88, 99, 105, 108,	seafood hub, and, 209-17, 220, 225
114, 116, 119, 122, 126–29, 177,	EU Sugar Regime, 222
184–85, 211, 215–16, 220, 284, 292,	Exclusive Economic Zone, see EEZ
305–306, 308–309, 330	export and import values of fish
French Indian Ocean territories,	product, 88, 102–103
180, 182–83, 190	Export Processing Zone (EPZ), 197
Egypt, 10	extremophiles, 241–45
El Nino, 203	•
El Nuevo Constante, shipwreck, 237	F
Emperors, fish, 2	FAO Constitution, 49, 50
Environment Protocol to the Antarctic	FAO (Food and Agriculture
Treaty, 247	Organization), 2, 44–46, 50, 60–

61, 88, 91, 127, 204, 208, 210, 217–	Fisheries Act, 274–76
18, 231, 279, 281, 285–86, 290–91,	fisheries conflict
299, 310, 318, 326, 331–32	community-based, 63
FCMZ (Fishing Conservation and	"fisheries management", 6, 12, 338
Management Zone), 80	policy framework for, 54–69
Federation of Greek Aquaculture, 219	politicization of, 62
fish	see also fishing conflict
consumption, per capita, 3	Fisheries Partnership Agreement
decline of species, 327	(FPA), 216, 220
source of protein, 2, 6, 31	fisheries "refugia", 273
fish-aggregating devices (FAD), 181–82, 184–85, 204–205, 217, 220, 223	fisheries regime, legal background, 39–41
fish farming, 217–19, 328–29	fisheries resources exploitation, 9-14
fish harvest, 2	90
Fish Resources Management Act	fishermen
(FRMA), 158	as prisoners of war, 173
fish stocks, 9	livelihood of, 2, 144, 163
depleted, 33, 327	problems in Indo-Pakistani waters
exploited, 4	170–74
Indian Ocean, 3–4	problems in Indo-Sri Lankan
monitored, 2, 10	waters, 164–69
"ownership" of, 4–5	threats from Sea Tigers, 167
significance of, 2, 4	welfare schemes, 167
"fisher states", 3, 59–61, 66, 329	fishery "producers", 10
fisheries	fishing
as food security, 303-306	indigenous people, 142-45
as resource, 2–5	lagoons, 202–205
certification of, 318	livelihood, 2, 144
ecosystem, and, 31–32	see also fishermen; overfishing
exploitation in Indian Ocean, 9-14	fishing conflict, 7–8
French Indian Ocean territories, in,	basic typology of, 55-56
177–90	conceptualization of, 55
governance, in ocean, 5-6, 16, 228	see also fisheries conflict
implications, 126–30	Fishing Conservation and
institutional aspects, 39-53	Management Zone, see FCMZ
local community, 63-64	fishing countries group, 10
Mayotte, in, 180–82	"fishing crisis", 3
policy directions, 14–17	Fishing Entity of Taiwan, 45, 47
policy frameworks, 5-9	fishing industry, 8, 57, 88-89
production figures, 88	Malaysia, in, 90
regional issues, 87–91	fishing quotas, 187
Réunion, in, 184–86	fishing sector, two categories, 2

fishing strategy, aboriginal, 147, 152–53	General Fisheries Commission for the Mediterranean (GFCM), 49–50
fishing technology, 33	geopolitics
Five-Year Fishery Development Plan,	bioprospecting in southern polar
223–24	regions, 242–47
"floating" basepoints, 112, 131	giant water ferns, 231, 237
flags of convenience (FOC), 64, 68,	Global Ballast Water Management
212–13, 225, 287	Programme (GloBallast), 14, 234–36
FOC states, 65	award, 235
Food and Agriculture Organization,	global commons, 14
see FAO	Global Environment Facility (GEF), 234
food security, and fisheries, 303-06	Global Programme for the Protection
foreign direct investment (FDI), 198	of the Marine Environment, 309
Forum Fisheries Agency (FFA), 47	Global Risks 2007, 25–26
France, 10, 16, 78, 80, 91, 122	global temperatures, 25, 30
claim on Tromelin Island, 123	global warming, 3, 333
possessions, 130, 177–78	globalization, 13, 198, 216, 220, 236, 338
relations with Mayotte, 123	Globallast Partnership Project, 229, 235
treaty with Australia, 188	Glorioso Islands, 121-22, 133, 180
France Overseas Department, see	glycoprotein, 245
DOM	government, role of, 61–63
Freddy, Numberi, 65	Great Australian Bight Marine Park
French Indian Ocean territories, 12,	(GABMP), 316–17
179	Great Barrier Reef, 315–16
EEZ, 180, 182-83, 190	Great Barrier Reef Marine Park
fish catch, 180	Authority, 90
fisheries in, 177–90	Greenpeace, 211, 225
list of, 178	"Green Revolution", 304
French National Museum of Natural	Gulf Cooperation Council, 85
History, 187	Gulf of Aqaba, 79
French Southern and Antarctic Lands	Gulf of Kutch, 172
(FSAL), 178, 183, 190–91	Gulf of Mannar, 165, 168
freshwater fish population, 4	Gulf of Martaban, 111
Fukuseki Maru 7, 183	Gulf of Myanmar, 79
	Gulf of Oman, 79, 111
G	Gulf of Thailand, 3, 86, 88, 327
Gaia Theory, 27	"gunboat diplomacy", 56, 65
Gandhi, Indira, 165	Gwatar Bay, 112
Ganges, river, 34, 75, 113	
GATT, 257	Н
"Gene Revolution", 304	"hard law instruments", 7, 44
Genencor International, 244, 246	Harmful Algal Blooms (HAB), 232

Hazard Analysis Critical Control	Independent Commission Against
Point (HACCP), 318	Corruption (INCAC), 201
Hazra, Sugata, 335	India, 3, 60–62, 74–75, 79, 85, 113, 318
Heard and McDonald Islands, 106, 129	agreement with Sri Lanka, 11, 119-
"Heart of the Third World", 300, 334	20, 165, 175
Hellenic Aid Programme, 219	boundary dispute, 120-21, 170-72
Hellenic Centre for Marine Research,	boundary negotiations with
219	Bangladesh, 124
Hill, Robert, 317	Environmental Protection Act, 312
Himalayas, 34	National Coastal Zone
holistic ecosystem approach, 7	Management Authority, 312
Homer-Dixon, Thomas, 23	tri-junction location, 27
Honduras, 65	Indian fishermen, problems of, 166-
horizontal conflicts, 7	67, 172–74
Horn of Africa, boundaries, 8, 79	in Indo-Pakistani waters, 170-74
Howard, John, 147, 317	Indian Ocean, 2–4
Human Development Index, 222	claims, 105, 107
Human Development Report, 335	definition, 106
human-ecological security, 334–35	fish stocks, 3–4
	fisheries exploitation, 9–14
I	fisheries policy directions, 14-17
IATTC (Inter-American Tropical Tuna	maritime boundary delimitation,
Commission), 45, 50, 280	125–26
ICCAT (International Commission for	policy framework in, 5-10
the Conservation of Atlantic	sea lanes, 28
Tunas), 45, 47, 50, 280	Indian Ocean basin, 73, 87-88, 92
Iceland, 66	territory disputes, 75-76
ICZM (integrated coastal zone	Indian Ocean Commission (IOC), 184
management), 307-308	189, 192, 208, 213
see also coastal management	Indian Ocean fisheries, 338, 340
Îles Éparses, see Scattered Islands	challenges, 326–32
illegal, unreported and unregulated	data collection, 331
(IUU) fishing, 16, 52, 84, 90-91,	future for, 325–41
105, 128, 211, 287–88, 290, 332	resources and exploitation, 72-93
Ilois, legal case, 133	Indian Ocean Fisheries Commission
IMO Ballast Water Convention, 235	(IOFC), 285
IMO (International Maritime	Indian Ocean island disputes, 121-24
Organization), 14, 229, 309	Indian Ocean littoral states, 28, 29, 35
response to impact of ship ballast,	105, 108, 116, 128, 302
232–35	Indian Ocean Marine Affairs
import and export values of fish	Cooperation (IOMAC), 44, 48
product, 88, 102-103	Indian Ocean Region, see IOR

Indian Ocean Region Group, see integrated coastal zone management, **IORG** see ICZM Indian Ocean Rim Association for Integrated Resort Scheme (IRS), 206 Regional Cooperation, see IORintellectual property, 256-58 **ARC** Inter-American Tropical Tuna Indian Ocean rim, 6, 27, 31, 34, 36 Commission, see IATTC environmental security, 32–35 Intergovernmental Panel on Climate Indian Ocean states, 10, 15, 27, 59, 68, Change, see IPCC Intergovernmental Plan of Action to Law of the Sea, and, 108-109 Prevent, Deter and Eliminate Indian Ocean Tuna Commission, see Illegal, Unreported and **IOTC** Unregulated Fishing, see IPOA-Indians in Mauritius, 195–97, 219 IUU International Commission for the Indigenous Fisheries Ranger Conservation of Atlantic Tunas, Programme, 158 Indigenous Fisheries Strategy, 147 see ICCAT Indigenous Fishing Fund, 158 International Convention for the indigenous knowledge systems, and Control and Management of strategies, 335-37 Ships Ballast Water and Indigenous Land Corporation, 151 Sediments, 235-36 indigenous people International Convention for the definition, 159-60 Prevention of Pollution from fishing, and, 142-45 Ships, 309 related terms, 160 International Convention on Offshore Western Australia, 143-47 Dumping, 309 see also Australian Aborigines International Court of Justice, 66, 80 Indira Gandhi Institute of international instruments, 308 Development Research, 30 International Labour Organization, 159 International Maritime Organization, Indo-Pakistan waters, 11 problems of fishermen in, 170-74 see IMO Indo-Sri Lankan waters, 11 International Organization for Standardization, 299 Indonesia, 3, 27, 34, 48, 57, 61, 90, 121, 215, 225 International Polar Year (IPY), 254 International Seabed Authority (ISA), archipelagic baselines, 115 coastal management challenges, 312 marine resources, 329 International Security, 23 International Tribunal for the Law of treaty with Australia, 126, 134 Indonesian archipelago, 8, 79 the Seas, see ITLOS industrial fishing, 202, 209-12, 282 Inter-Service Intelligence (ISI), 172 industrialization, in coastal zones, 30-IOR-ARC (Indian Ocean Rim 31 Association for Regional

Cooperation), 10, 60–61, 69, 340–	J
41	Jadavpur University, 335
IOR (Indian Ocean Region), 4, 6, 10,	Jakarta Mandate on Marine and
22, 27, 33, 55, 68, 73, 75, 105, 298–	Coastal Biodiversity Resources,
99, 318, 341	42, 58, 309, 313
climate change, 25, 332–35	Japan, 3–4, 16, 29, 47, 61–62, 64, 186
coastal management, 306-308	Japanese Diet, 62
fish management policy, 4	Jayewardene, Hiran, 48
institutions of, 44–49	Jeddah Convention, 49
marine biodiversity, 332–35	Joint Development Area, 80, 83
marine environment, 306–308	Joint Petroleum Development Area
national initiatives, 311-14	(JPDA), 80, 126
regional initiatives, 310–11	Jordan, 79
security and sovereignty, 300-303	Juan de Nova Island, 121-22, 133, 180
IORG (Indian Ocean Region Group),	jurisdictional limits, established, 78-
300–301, 321, 341	81
IOTC (Indian Ocean Tuna	jurisdictional problems, in regional
Commission), 16, 44-46, 49-50,	seas, 73
52, 60, 129, 184, 189, 210, 212–13,	
279, 280, 284, 292, 311, 330	K
background, 285–87	Kachchativu Island, 11, 164-66
challenges, 288–91	agreement between India and Sri
compliance measures, 287–88	Lanka, 165, 175
convention area, 281	Kaplan, Robert, 23
membership, 286–87	Kashmir, 74
non-members, 289, 294	Keating, Paul, 146
objectives, 192	Kenya, 29, 60-61, 78, 91, 284, 312
structure of, 286–87, 294	coastal management, 313
IPCC (Intergovernmental Panel on	coastline, 307
Climate Change), 25, 332-33, 334	EEZ concept, 127
IPOA-IUU (Intergovernmental Plan	unilateral claims, 118–19
of Action to Prevent, Deter and	Kerguelan Islands, 106
Eliminate Illegal, Unreported	Kimberly Aboriginal Aquaculture
and Unregulated Fishing), 44,	Corporation, 154
50–51	Kimberly Aquaculture Development
Iran, 60–61, 74, 79	Plan, 154
straight baseline claim, 111-12	Kimberly College of Technical and
Ireland Blyth Ltd (IBL), 226	Further Education, 157
Israel, 74, 79	Kimberly region, West,
ITLOS (International Tribunal for the	fishing practices, 11
Law of the Seas), 66–67	indigenous fishing, 141–60

recreational fishing, 153-54	signatories, 108, 130
see also Western Australia	tuna categorization, 280
Kooljaman Resort, awards, 157	Lovelock, James, 27
Korea, 16, 47	low-water line, 113
Koryu Maru 38, 184	definition, 131
Kuwait, 111	
Kuwait Convention, 49	M
	Mabo case, 147
L	Mackerels, Indian, 2
Laccadive Sea, 79	Madagascar, 27, 61, 78, 122, 185, 195,
lagoon fisheries, and tourism, 206-	284, 306
207	claim on Tromelin Island, 123
lagoons	independence, 121, 182
fishing in, 202–205	straight baseline claim, 110
pollution, 204	territorial claim, 182
Lahore Declaration of 1998, 171	Madagascar Channel, 121
Lakhshwadeep Islands, 231	Madrid Protocol, 248–50, 252, 256,
Land-based Oceanic Industry, 200	258, 263
land boundary on the coast,	Maersk-Sealand, 200
problems, 120–21	Malaysia, 27, 61, 80, 89
land-locked states, rights of, 40	fishing industry in, 90
Large Marine Ecosystem, see LME	marine conservation policy, and
Law of the Sea Convention, see	law, 15, 268–77, 330
UNCLOS	national marine parks, document,
least developed countries (LDC), 199	272–73
Liangbiao Cheng, 245	straight baseline claim, 114
Liberation Tigers of Tamil Elam	unilateral claims, 119
(LTTE), 166	Malaysian Directorate of National
threats from Sea Tigers, 167	Mapping, 114
Limits in the Seas series, 109, 130	Malaysia Plans, 273–74
Lischewski, Christopher, 226	Maldives, 10, 25, 80, 106, 195, 306-307
LME (Large Marine Ecosystem), 7, 44	archipelagic baselines, 115
approach, 42	EEZ, 307
see also BOBLME	unilateral claims, 119
London Dumping Convention, 309	mangroves, 82
long-distance water fleets (LDWF),	mare nullius, 145
210	Marine Areas Act, 111, 116
LOSC (United Nations Law of the	marine biodiversity, 5, 7, 13, 15, 17,
Sea Convention), 105-106, 109-	32, 41, 51, 54, 67, 105
17, 122, 126–27, 130–31, 305	conservation policy and law, 268-
framework, 308-309	77

impact of illegal fishing, 64–65	maritime conservation, 54
implications, 126–30	maritime jurisdiction, 75–78, 97
Indian Ocean Region, in, 332-35	claims to, 107–21
lack of political will, 58, 67	historic claims, 119-20
maximization of, 58, 60-61, 68, 73	unilateral claims, 118–19
threats to, 271	Maritime Risk Reduction Centres
see also biodiversity	(MRRCs), 174
marine bioinvasion, see bioinvasion	maritime space, managing, 81–82, 89
marine biotic resources	Maritime Zone of India (MZI) Act,
managing, 82–83	169, 175
sharing, 86–87	MARPOL Convention, 59, 309
Marine Conservation Centre, 213	Mascarene Basin, 80
marine conservation policy, of	Mascarene Plateau, 202, 224
Malaysia, 15, 268–77, 330	semi-industrial fishing on the, 207-
marine degradation, 15	208
marine ecosystems, 57	Matang Forest Reserve, 270
marine environment, 82, 87	Mauritius, 12-13, 45, 60-61, 78, 80, 88,
defining community, as a resource	106, 116, 195, 306
for, 63	claim on Chagos Archipelago, 124,
exploitation of, 57–58	194
of IOR 306-308	claim on Tromelin Island, 123, 182,
security and sovereignty in, 300-	194
303	coastline, 206, 223
marine management and governance,	diversification and dependence,
models of, 315-20	197–200
Marine Parks, 275	fresh water in, 223–24
Marine Protected Areas, see MPAs	historical introduction, 194-97
marine resources management	historic bay closing line, 120, 133
regimes, 58–61	Indians in, 195–97, 219
Marine Stewardship Council, see MSC	industrial fishing, 202, 209-12
Marine Zones of the Maldives Act,	lagoons, fishing in, 202-205
119	maritime zones, measured, 131
maritime boundary, 11, 25, 75, 78, 80-	Port Louis, 200–201
81	semi-industrial fishery, 207–208
agreements, 100–101	sugar exports to European Union,
disputes, 9	198, 221
Indian Ocean, 125–26	sugar industry in, 197-99, 220
negotiations, 85	textile industry in, 197-99, 222
straight baselines, 76, 77, 79, 108,	Mayotte Island, 12, 122–23
110–11, 126, 128	Departmental Collectivity of
see also baselines	Mayotte, 190

fisheries in, 180–82	National Environmental Engineering
relations with France, 123	Institute (NEERI), 168
McPherson, Kenneth, 341	National Environmental Management
Mediterranean Shipping Company	Act (NEMA), 313
(MSC), 200	National Institute of Oceanography,
"mega-diversity" states, 27	see NIO
Mehta, Sureesh, 173	National Integrated Coastal Zone
Merck Sharp & Dohme, 244	Management Policy, 274
Meteorological Organization	National Islands Development Board,
Congress, 123	274
Mexico, 27	National Marine Biodiversity Plan
MICROMAT, 244	(NAMBIP), 15
Millennium Ecosystems Assessment,	national marine parks Malaysia,
269	document, 272-73
minerals exploitation, ocean, 10	National Native Title Tribunal, 147-
"modern sovereignty", 58, 68	48
see also traditional sovereignty	National Oceanic and Atmospheric
monitoring, control, and surveillance	Administration, 42
(MCS), 330	National Policy on Biological
monsoons, 34	Diversity, see NPB
Mozambique, 61, 78, 91, 125, 284, 306,	National Science Foundation, 245
312	NATO, 22
straight baseline claim, 110	Native Title Act (NTA), 147–48
Mozambique Channel, 12, 106, 110,	native title claim
125, 133, 180, 182–83, 185	Bardi Jawi, 149–51
Scattered Islands, 121-22	Rubibi, 151–52
MPAs (Marine Protected Areas), 68,	native title in Australia, 147–52
298, 316–17, 339	Native Title process, 145
MSC (Marine Stewardship Council),	Nehru, Jawahar Lal, 164
299, 317–18	Nelson, Brendan, 66
Multi-Fibre Agreement (MFA), 198–99	Neolithic Revolution, 217
Musandam Peninsula, 113	New Fortune, 183
Myanmar, 10, 34, 113	New Moore Island, 124
straight baseline claim, 111	New Partnership for Africa's
	Development, 85
N	New Zealand, 47, 62, 91
Nairobi Convention, 48	newly industrialized countries (NIC),
members, 310	198
National Biodiversity Policy, 269	NIO (National Institute of
National Coastal Zone Management	Oceanography), 235
Authority, 312	NNTT (National Native Title
National Coastal Zone Policy, 274	Tribunal), 147–48

NOAA (National Oceanic and Atmospheric Administration), 42	definition, 57 evidence of, 327
non-governmental organizations (NGOs), role, 169, 302, 319–20,	see also fishermen; fishing Overseas Collectivity of the French
328	Republic, see COM
non-state actors, 56, 58	Overseas Region, see ROM
impact of, 64–65	"ownership" of fish stocks, 4-5
Noordwijk Guidelines for Integrated	"ownership" of the sea, 4-5, 11, 56,
Coastal Zone Management, 308	142, 145, 158
North East Atlantic Fisheries	
Commission (NEAFC), 50	P
Northern Territory, 148, 152	P and O Nedloyd, 200
Northwest Atlantic Fisheries	Pacific Merchant Shipping
Organization (NAFO), 50	Association, 233
NPB (National Policy on Biological	Pakistan, 10, 74-75, 79
Diversity), 15, 271–72, 274, 276–	boundary dispute, 120-21, 170-72
77	fishermen problems in Indo-
NSF (National Science Foundation),	Pakistani waters, 170–74
245	straight baseline claim, 111-12
	Pakistan Fisher Folk for United
0	Nations, 173
ocean	Pakistan Institute of Labour
minerals exploitation, 10	Education and Research (PILER),
sea lanes, 10	172
waste disposal, 10, 30	Pakistani fishermen, problems of,
Ocean Conveyor, 24	172–74
ocean "mining", 10	Palaearctic biogeographic province,
"Ocean of the South", 300, 325, 335	27
ocean policy, 84–85	Palk Bay region, 63, 79, 120, 168
Ocean Press, 225	Palk Strait, 62, 120, 165
oil spill, 28–30	Pamban channel, 168
see also pollution	Panama, 65
Oman, 61	Papua New Guinea, 85
straight baseline claim, 113–14	Pardo, Arvid, 24
"operational assertions", 109	Parties to the Convention on
One Arm Point, 151	Biological Diversity, 58
trochus hatchery, 155–57	pas géométriques, 206–07
open sea fishery, 184–85	Patagonian Toothfish, 81, 90–91, 186–
orange roughy, 46	87, 211–12
Organization of African Unity, 122	stocks, 189
Oriental biogeographic province, 27	patent, 258
overfishing, 5, 11, 24	companies applying for, 247

Pedra Branca, 80, 103	Regional Convention On Fisheries
Persian Gulf, 8, 28–29, 63, 79, 82, 106,	Cooperation Among African
111	States Bordering The Atlantic
perspectives on sea, 145-46	Ocean, 40–41
Peru, 3, 27	Regional Fisheries Management
Pew Oceans Commission, 68	Organizations (RFMOs), 60, 280
Philippines, the, 48, 61, 215, 225	regional seas programme, 48–49, 310
phytoplankton, 217–18	"regulatory failures", 16
Pimentel, David, 231	Research and Analysis Wing (RAW),
Pinchet, Gifford, 315	172
pirate vessels, 187–88	Réunion, 12, 80, 106, 189, 195
plankton, 209	fisheries in, 184–86
"plantocracy", 197	Reykjavik Declaration on Fisheries in
"ploughing" effect, 32	the Marine Ecosystem, 41, 44, 51
political boundary issues, 73	Rio Declaration, 74, 299
policy framework	Rio Earth Summit, 255
fisheries conflict, for, 54–69	Rodrigues Island, 120
Indian Ocean, in, 5–10	ROM (Région d'outre-mer), 178, 190
pollution, 24, 33, 48–49, 89	ROPME Area, 49
lagoons, 204	Rubibi native title claim, 149–51
oil spill, 28–30	Rules of Origin (ROO), 215–16, 220,
ship-sourced, 309	225
water-borne, 59	
pollution control, 35	S
Port Louis, 200–01	"saltwater people", 142
Prince Edward Islands, 106	satellite surveillance system, 188
Princess Tuna, company, 213–14	Saudi Arabia, 10, 34, 79, 111
Protocol on Environmental	Saving Fish and Fisheries: Towards
Protection, 248	Sustainable and Equitable
Pulau Batu Puteh, 80, 103	Governance of the Global Fishing
Purbasha Island, 124	Sector, 326–28
purse seine, 16, 32, 183	Scattered Islands, 121-22, 180, 189,
see also "superseiners"	191
1	fisheries in, 182–84
R	Mozambique Channel, and, 121-22
Ramgoolam, Navin, 222	sovereignty of, 12
Rann of Kutch, 74, 121, 170–71	Schofield, Clive, 9
Red Sea, 42, 49, 79, 82, 106, 113	Scientific Committee on Antarctic
Red Tides, 232	Research (SCAR), 253
Regional Commission for Fisheries	seafood consumption, world's
(RECOFI), 47, 49	highest, 143

"seafood hub", 13, 200	claims to territorial sea, 116, 128,
European Union, and, 209-17	131–32
Seychelles, 210	Somalian Coastal Current, 42
sea lanes of communication (SLOCS),	South Africa, 29, 48, 60
23	coastal management policy, 312–13
"sea lords", 31	coastline, 307
Seas and Submerged Land Act, 148	South Asia
Sea Tigers, threats from, 167	boundaries, 8
security issues, oceans, 6, 9	fishermen, insecurity of, 163-74
semi-industrial fishery, in Mauritius,	South Asian Labour Forum (SALF),
207–208	173
semi-industrial fishing, 202, 282	South Asian Seas programme, 310
Mascarene Plateau, on the, 207-	South-East Atlantic Fisheries
208	Organization (SEAFO), 45
Sethusamudram Ship Canal Project,	South Korea, 61, 186
12, 168, 175	South Talpatty Island, 124
"settler colonies", 195	South West Indian Ocean
Seychelles, 4, 10, 78, 80, 91, 106, 124,	Commission, 311
183, 195, 284, 306	South West Indian Ocean Fisheries
archipelagic baselines, 115	Commission, see SWIOFC
seafood hub, 210	South West Indian Ocean Fisheries
Shah, Muhammad Ali, 173	Project, see SWIOFP
ship ballast, 229–30	Southeast Asia, 3
bioinvasion, 230-32	coral reefs in, 326-27
impact of, 13-14, 227-29	Southern Africa Development
response by IMO, 232-33	Community (SADC), 201
technical solutions, 233-34	Southern Africa Far East (SAFE),
vessel types, 230	optical fibre cable, 201
see also bioinvasion	Southern Bluefin Tuna (SBT), 2, 57,
shrimp farming, 328–29	65, 183, 212
Silori, C.S., 337	Southern Exclusive Economic Zone,
Singapore, 80, 89	fisheries in, 186–88
Singh, Swaran, 6	Southern Indian Ocean Fisheries
Sir Creek, 120, 121	Agreement (SIOFA), 45-46, 61,
boundary dispute, 170–71	91–92
Sittang River, 111	Southern Ocean, as nursery, 15
Skipjack Tuna, 212, 284–85, 293	Southern Ocean Maritime Patrol and
small island developing states (SIDS),	Response (SOMPR), 129
284, 333	southern polar regions,
soft law instrument, 7, 43–44, 50–51	bioprospecting in, 242-47, 260
Somalia, 29, 34, 125, 284	sovereignty claims, 76

Soviet Union, collapse of, 21	"superseiners", 306
Spain, 10, 16, 183	see also purse seine
Spanish Patent Office, 246	sustainability, 57
species composition, 4	concepts, 10
spiny lobster, 186–87	Swaminathan, M.S., 339
sport fishing, 202	SWIOFC (South West Indian Ocean
swordfish fishery, and, 208-209	Fisheries Commission), 46-47, 49,
Sri Lanka, 29, 48, 60-63	61, 184, 189
agreement with India, 11, 119-20,	objective, 192
165, 175	SWIOFP (South West Indian Ocean
Coastal Zone Management Policy,	Fisheries Project), 12, 184, 189,
312	192
internal conflict, 12	swordfish, 13, 183, 289, 293
Sri Lanka fishermen, problems of,	sport fishing, and, 208-209
168–69	
"stakeholders", 315, 319, 321	T
State Marine Administrations, 233	Taiwan, 10, 16, 44, 52, 57, 64–65, 290–
Statistical area 51, 282–83	91
Stern, Nicholas, 27	and China, 45
straight baselines, 76–77, 79, 108, 110–	problem of, 59
11, 126, 128	Tamil Nadu State government, 12, 63
Bangladesh, 113, 119	tanker disasters, 29
Djibouti, 113	Tanzania, 29, 78, 85, 284, 312
Madagascar, 110	technology transfer, 35
Malaysia, 114	Teekay Shipping Corporation, 233
maritime boundary, 76–77, 79, 108,	terra firma, 145
110–11, 126, 128	terra nullius, 145, 147
see also baselines	terrestrial biodiversity, 15
Mozambique, 110	textile industry in Mauritius, 197–99,
Myanmar, 111	222
Oman, 113–14	Thailand, 61, 74, 80, 215, 225
Pakistan, claim, 111–12	straight baseline claim, 114–15
Strait of Hormuz, 79, 106, 113	"Third World Ocean", 261
Strait of Malacca, 28–29, 88, 106	Thon des Mascareignes, 215, 226
Strait of Mozambique, 29	"Tiger of the Indian Ocean", 198–99
Straits of Singapore, 80, 103	Timor Gap Treaty, 83, 126
St. Vincent, 65	Timor Sea Treaty, 83, 126
subsistence fishing, 88	total allowable catches (TAC), 187, 208
Sudan, 79	Torres Strait, people, 142–43, 147
sugar industry in Mauritius, 197–99,	Torres Strait Treaty, 83, 85
220	tourism, and lagoon fisheries, 206-
Sundarbans delta, 25, 335	207

Trade-Related Aspects of Intellectual	U
Property Rights (TRIPs), 256,	Ukraine, 186
265	U.N. Agreement on Straddling Fish
traditional fishing, 202	Stocks and Highly Migratory
by indigenous people, 142-45	Fishing Stocks (UNASFSHMFS),
"traditional sovereignty", 58, 62	60, 61
see also modern sovereignty	UNCLOS (U.N. Convention on the
transnational corporations (TNCs),	Law of the Sea), 7-9, 15, 25, 39-
304	44, 59, 65, 68, 73–75, 84, 90, 93,
trawling, 32, 84	166, 169, 210, 215, 249, 265, 285,
TRIPS Agreement, 248, 257–58	293
trochus hatchery, 155–57	Antarctic, and, 258-60
trochus shells, 145, 154	Indian Ocean states, and, 108-109
Tromelin Island, 80, 133, 180, 185, 189	U.N. Conference on Environment and
background, 123	Development (UNCED), 44, 50,
claim by France, 123	232, 299, 308
claim by Madagascar, 123	U.N. Conference on the Human
claim by Mauritius, 123, 182, 194	Environment, 23
Tsamenyi, Martin, 15	U.N. Convention 1982, see UNCLOS
Tsukiji fish market, 4	UNESCO World Heritage, 184
tsunami, 27–28, 203, 302	U.N. Fish Stocks Agreement
tuna, 9, 13, 45–46, 183, 210, 212	(UNFSA), 7, 44, 288–89, 290–91
Bigeye, 2, 57, 212–13, 284–85, 288–	U.N. Food and Agriculture
89, 293	Organization, see FAO
canned, 284	U.N. General Assembly, 122
conservation, 16	Unilever, 317
exploitation, 3, 10	United Nations Commission on the
illegal catch, 304	Limits of the Continental Shelf,
industry, 3, 284, 306	see CLCS
LOSC categorization, 280	United Nations Development
market, 4, 213, 280	Programme (UNDP), 234
Skipjack, 212, 284–85, 293	United Nations Environmental
Southern Bluefin (SBT), 2, 57, 65,	Programme (UNEP), 26, 44, 85,
183, 212	254, 309–10, 313
Yellowfin, 57, 212, 284–85, 289, 293	United Nations Food and Agriculture
tuna canning, 4, 280	Organization, see FAO
tuna fisheries management, 15	United Nations Law of the Sea
tuna-like stocks, 286, 291, 293	Convention, see LOSC
Tuna Management Act, 62	United States, 3, 22, 75, 113–16
Tuticorin port, 168–69, 175	United States Freedom of Navigation
Tyndall Centre for Climate Change	Program, 108–109
Research, 27	University of Bordeaux, 244

University of Ghent, 244	Western Hemisphere, 29
University of Illinois, 245	Western Indian Ocean (WIO), 15, 279,
University of Liège, 244	280–85, 288, 291
University of Nottingham, 244	countries in, 292
University of Tasmania, 246	exclusive economic zones of, 282
University of Tuscia, 245	tuna industry, 284
urbanization in coastal zones, 30–31	Western Indian Ocean Marine Science
U.S. National Science Foundation, 26	Association (WIOMSA), 242, 311
U.S. Patent Office Database, 246	Western Indian Ocean Tuna
USSR, 186	Organization (WIOTO), 47, 311
	Whaling Commission, 59
\mathbf{V}	wild fisheries, 217
Vessel Monitoring System (VMS), 211,	World Atlas of Biodiversity, 242
288, 290, 330	World Bank, 3, 27, 159, 308, 310, 325
vessel types, and ballast needs 230	World Bank Report, 326–28
vertical jurisdictional conflict, 7	World Coast Conference, 308
Vienna Convention on the Law of	World Commission on Environment
Treaties, 52–53	and Development (WCED), 87,
Voluntary Redundancy Scheme	308
(VRS), 198	World Economic Forum (WEF), 25
(World Food Programme, 304
W	World Food Summit, 303
Washington Declaration on Protection	World Intellectual Property
of Marine Environment from	Organization (WIPO), 262
Land-based Activities, 44	world population, 83
waste disposal, ocean, 10, 30	World Summit on Sustainable
water ferns, giant, 231, 237	Development (WSSD), 44, 50, 299
wave power, 222	World Trade Organization (WTO), 41,
welfare schemes, for fishermen, 167	45, 198, 215, 221–22, 256–57, 265,
Western and Central Pacific Fisheries	299, 304
Commission (WCPFC), 45, 50	World Wildlife Fund for Nature
Western Australia	(WWF), 317
fishing license, 68	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
indigenous fishing, 11, 141–42	Υ
indigenous people, 141, 143–47	Yawuru, indigenous people, 151
recent developments in, 157–58	Yellowfin Tuna, 57, 212, 284–85, 289, 293
West Kimberly region, 11, 141, 149,	Yemen, 125
151	
Western Central Pacific Ocean	Z
Fisheries Commission, 329	Zakri, Hamid, 245

Zone of Cooperation, 83

zooplankton, 209, 217-18

Western Central Atlantic Fishery

Commission (WECAFC), 49