

Index

- Aboriginal and Torres Strait Islander Commission 84
- Aboriginal ceremonies, river locations and 103–4
- Aboriginal Cultural Heritage Act 2003* (Qld) 202, 203
- Aboriginal Forum 81, 86–7, 215, 223
- Aboriginal people 85
 - arid regions and 63
 - colonisation and 6
 - dams 12
 - Lake Eyre Basin management and 3, 89, 92–106, 213, 222, 223, 224, 225, 229
 - language groups 107
 - river flows and 77, 231
 - waterways and 103–6
- Aboriginal values, development proposals and 170
- absentee land owners 146
- accommodation, demand for 125
- active irrigation licences 231
- Adani Mining Group 176
- adaptive management 134, 201
- aerial tourism, Kati Thanda-Lake Eyre 123–6
- AgForce 207–8, 209, 222, 223
- Agricola, Georgius 173
- agriculture
 - promotion of 64
 - regulations 206, 209
 - shale gas industry versus 188
 - stockholders 207
- aircraft charter business 123–6
- air pollution, Mount Isa 179
- algae 11
- Alice River 8, 195
- Alice Springs 3, 6, 63, 81, 174, 196
- alien invasive species, *see* invasive species
- Alpha coal mine 176, 177
- Alpurrurulam (Lake Nash) 103, 105
- alternative value estimates 166
- amenity value, environment 159, 161
- Ampilatwatja 104
- Angeldool 127, 128
- annual flows, Cooper Creek 154
- annual rainfall
 - Brenda Station 137, 138, 139
 - Ethabuka Reserve 66, 68
- aquaculture, controls 206
- aquatic fauna, health of 207
- aquatic habitats 43–4, 156
- aquatic plants 11, 145
- Aral Sea 52
- Aramac 8, 38, 57
- Arckaringa Basin 174, 175, 188
- Arid Areas Water Resources Commission (SA) 155
- arid zone river systems 19, 156
- artesian springs 7, 9, 207
 - pollution 70
 - rehabilitation 40
- Arthington, Angela 156
- athel pine (*Tamarix aphylla*) 70
- Australian Broadcasting Corporation (ABC) 89, 123
 - Lake Eyre documentary 151–2, 155
- Australian Conservation Foundation (ACF) 155
- Australian Cotton Federation 155
- Australian Floodplain Association 121
- Australian Government 64, 79, 80, 81, 85, 86, 87, 110, 125, 132, 195, 216, 231
 - northern development policy 234
 - water flow return policy 167
- Australian pelican (*Pelecanus conspicillatus*) 10
- Australian Riverprize 2014 x, 7, 14, 78, 237
- Australian smelt (*Retropinna semoni*) 33, 34, 47, 48
- Australian Society for Limnology 156
- average sample value 163
- backwaters 49
- Balonne River 127–35, 137, 219, 220
 - see also* Lower Balonne system
- bans 1996, cotton irrigation 156
- Barcaldine Springs 31, 32, 39
- Barcoo grunter (*Scortum barcoo*) 33, 34, 36, 45, 47, 48, 49, 50
- Barcoo River 6, 8, 20, 22, 33, 36, 43, 80, 107, 108, 114, 195, 215
 - Aboriginal stone arrangements 77
- Barcoo Shire Council 153, 155, 215
- Barkly Tablelands 106, 195–6
- Barmah–Millewa Forest 168
- barred grunter (*Amniataba percooides*) 33, 34, 36
- Barwon–Darling Rivers 145, 164, 165
- base metals mining 174, 177–9, 181
- Bean, John 151
- Beardmore Dam 127, 128, 137, 219
- Beatty, Peter 141
- beef industry, *see* cattle grazing industry
- benefit-transfers 169
- benthic algae 45
- biennial conferences 87
- biodiversity
 - Macquarie Marshes 145–8
 - water flows and 25
- biomass, summer fish stocks 49
- Birdsville 7, 11, 65, 81, 103, 114, 124, 125, 196
- Birdsville Conference 1995 80, 84, 85
- Birdsville Track 7, 119, 120
- Birrie River 127, 137, 139, 219
- Blanch, Stuart 156
- blood lead levels 179
- blue claw yabbies (*Cherax destructor*) 39
- Bokhara River 137, 219
- bony bream (*Nematalosa erebi*) 33, 34, 44, 45, 46, 48, 49, 50
- boom and bust cycle 8–11, 24, 27, 43–54, 63, 64–5, 70, 72, 84, 89, 108, 121, 229
 - cattle industry and 115
 - Cooper Creek 56
 - Cooper Creek turtle and 59
 - small mammals and 67
 - tourism and 123

- boom periods 22
 - fish ecology 45, 48–50
 - flooding 109
 - irrigation and 70–1
 - turtles and 60–1
- Border Rivers 164, 165, 169
- Boulia 36, 104, 114, 196
- Bowen Basin 174, 176, 185, 186
- Bradfield Scheme 12
- breeding cow industry 128
- Brenda Station 137, 138–9
- Brewarrina 127, 128, 134, 141
- Brisbane 124, 160
- Broadwater Billabong 57, 60
- Broken Hill 124, 174
- brown coal 175
- brush-tailed mulgara (*Dasyercus blythi*) 66, 67, 69
- Buckley River 183, 184, 232
- buffel grass (*Cenchrus ciliaris*) 14, 70, 233–4
- Bullabellalie 127, 128, 133
- Bulloo River 33, 38
- Bunn, Stuart 156
- Bureau of Meteorology 19, 139
- Burke River 114, 196, 197
- Burke, Robert O’Hara 4, 6, 154
- Burrendong Dam 145, 147
- bust conditions 66
 - fish ecology and 45
 - irrigation and 71
- butterflies 70

- camel (*Camelus dromedarius*) 14, 234
- Camooweal 65, 103, 104, 105
- Campaspe River 164, 165
- campfires, threat from 104
- cane toad (*Rhinella marina*) 14, 70, 71, 233
- Cape York Peninsula, Aboriginal opposition to Wild Rivers legislation 215, 217, 223, 224
- capped aquifers 205
- carbon sink 71, 168
- Carmichael mine 176, 177
- carp (*Cyprinus carpio*) 38, 40
- carp dudgeon (*Hypseleotris* sp.) 33, 34, 46, 48
- catchment management committees 91
- catchment protection mechanisms 217
- catch-per-unit-effort 66
- cattle grazing industry 6, 61, 78, 107–9, 115, 127–8, 137
 - Macquarie Marshes 145–8
 - organic production 113–17
- Century mine 177
- Channel Country 8, 9, 10, 20, 22, 43, 65, 82, 95, 99, 108, 110, 113, 114, 116, 160, 161, 187, 195, 199, 208, 209, 215, 223, 224
 - developmental impacts threats to 151–8, 233
 - flow alterations 210
 - protection of 117, 151–2, 216
 - Traditional Owners and 100, 101
- channel flows 20, 44, 51, 154
- chemical pollution, threat of 153, 188
- Chief Executive, water agency 205, 221
- China 176, 189
- Chinchilla 177, 187, 232
- Chinese ‘gardeners’ 12, 13

- Chlamydogobius* sp. 37
- choice modelling 161–2
- Clark Shaft failure 182
- ‘clean and green’ beef industry 115–16, 117
- climate change 71, 230
 - arid regions and 13–14, 110
 - coal seam gas industry and 187
 - habitat destruction and 70
 - Lake Eyre Basin 3, 236
 - river sustainability and 233, 234
- coal industry 169, 170, 173, 174, 176, 197
- coal seam gas (CSG) industry 70, 100, 169, 170, 173, 174, 176, 177, 189, 197
 - Lake Eyre Basin 232
 - moratorium on 222
 - Queensland 185, 186–7
 - threats from 158, 188
- collaborative legislation 216
- collaborative management, Lake Eyre Basin 83, 99, 224, 225
- collaborative planning, Birdsville Conference 84
- Colorado 188
- commercial fishing 159
- Commonwealth Environmental Water Holder 148
- community action and consultation
 - Lake Eyre Basin 88–9, 222–3, 237
 - river protection 210
 - sustainability and 234, 235
 - water allocation debate 148
 - Wild Rivers declarations and 218
- Community Advisory Committee 79, 81, 86, 87, 88, 89, 97, 215, 224
- Community Reference Group 141–2
- Computable General Equilibrium (GCA) modelling 169
- Condamine–Balonne Rivers catchment 13, 100, 127, 164, 165, 219–22
 - environmental flower reduction 133–4
 - irrigation and 128–35, 137–43
 - overdevelopment 231
- Condamine River 137, 138, 169, 219
- connective pathways 44
- Conservation Council of South Australia 155
- conservation partnerships 63, 77–93, 158
- conservation values, Lake Eyre Basin 43
- conservative dispersal, fish species 50
- consumer organisms 66
- consumptive water regulations 204
- consumptive water use, Lower Balonne catchment 221
- contingent valuation 161–2
- conventional gas production 175, 176
 - Cooper–Eromanga Basin 184–6
- Cooper Pedy 123, 124, 126, 174
- coolibah (*Eucalyptus coolabah*) 131, 139
- Coongie Lakes v, 3, 4, 8, 23, 24, 25, 50, 91, 96, 119, 200
- Coongie Lakes Ramsar Management Plan 92
- cooperative management 110
- Cooper Basin 174, 175, 176, 197
- Cooper Basin Water Strategy 209
- Cooper Creek x, 4, 6, 7–8, 11, 13, 14, 20, 21, 22, 23, 24, 25, 27, 31, 33, 38, 39, 43, 65, 83, 84, 95, 96, 99, 102, 107, 108, 114, 170, 195, 196, 198, 203, 206, 209, 215, 216, 218, 231, 235, 236

- boom and bust ecology 43–54
 irrigation development threats to 78, 79, 80, 151–8
 oil and petroleum industry and 232
- Cooper Creek Advisory Panel 155
 Cooper Creek campaign 1995 160
 Cooper Creek catchment 85, 195, 214
 flooding 119–22
 Cooper Creek Catchment Committee 121, 207
 Cooper Creek catfish (*Neosilurooides cooperensis*) 33, 34,
 36, 43, 45, 46, 48, 49, 51
 Cooper Creek Resource Operations Plan 204, 209
 Cooper Creek Scientific Workshop 80
 Cooper Creek tandan 49
 Cooper Creek turtle (*Emydura macquarii emmottii*) 55,
 57–60
 Cooper Creek Water Resource Plan 2011 (Qld) 81, 83,
 91–2, 203, 204, 205, 208, 215, 216–17, 232
 Cooper Creek Zone 196, 204
 Cooper–Eromanga Basin, oil and gas extraction 176,
 184–6
 Cooper’s Creek Protection Group 79, 80, 153–4, 155,
 158, 215
 Coordinator-General (Qld) 198, 199, 200, 203
 Coorong, environmental value of 162, 166, 167
 copper mining 175, 177, 179, 180, 181
 Lady Annie Mine 182–4
 corkwood (*Duboisia hopwoodii*) 104
 cormorants (*Phalacrocorax* sp.) 10
 cost–benefit analysis
 development proposals 237
 economic environmental values 236
 Lake Eyre Basin and 169
 minerals industries 189
 Murray–Darling Basin 165–6
 cotton irrigation industry, *see* irrigation; irrigation
 development
- Council of Australian Governments (COAG) Water
 Reform Framework 215, 216
- court cases, Lower Balonne catchment flows 220–1
 Court of Appeal (Qld) 221
 Cripps, Andrew 100, 157, 158, 207, 222, 223
 critically endangered species, fish 31
 cross-border committees 215
 cross-border flows 204
 crude oil production 175, 184
 Cubbie Station 127, 129, 131, 138
 water licences litigation 220–1
 Culgoa National Park 139
 Culgoa River 127, 133, 219, 220
 water flow reduction impacts 137–43
 Cullen, Peter 132, 141
 Cullyamurra Waterhole 12, 20, 25, 154
 Cumulative Management Area 201
 cumulative production
 Mount Isa field 179
 Olympic Dam 181
 Currareva 22, 27, 83, 153, 154, 215
 Currareva irrigation development 13, 79, 80, 152–3,
 155, 216
Currareva Partnership v Welford (2000) 215
 custodianship
 Macquarie Marshes 148–9
 Queensland legislation 202, 203
 cyclones 108, 114
- daily water flow 26
 dams 7, 12, 19
 construction 220, 221, 230, 231
 prohibition of 232
 Darling River 127, 132, 134
 water flow reductions 167
 Darling, Vicki 157
 darter (*Anhinga novaehollandiae*) 10
 Davies, Peter 156
 Delbessie agreements 202
 Denny, Martin 156
 Department of Environment and Natural Resources
 (SA) 155
 Department of Environment and Resource Management
 (Qld) 214
 Department of Infrastructure, Local Government and
 Planning (Qld) 224
 Department of Natural Resources (Qld) 139, 141, 155,
 156–7
 Department of Natural Resources and Mines
 (Qld) 207, 214
 Department of the Environment (Qld) 155
 desalination 161
 desert channels 65–6, 78, 89, 121, 207
 desert rainbowfish (*Melanotaenia splendida tatei*) 33,
 34, 45, 46, 50
 desert river system, Lake Eyre Basin 3–18
 desert uplands 65
 desert wildlife, developmental plans and 63–74
 developmental assistance programs 63
 developmental threats, rivers and 12–14
 Diamantina River x, 12, 13, 21, 31, 33, 36, 37, 38, 39,
 40, 57, 65, 95, 99, 103, 104, 107, 108, 113–14, 121,
 152, 153, 161, 170, 195, 196, 198, 203, 204, 206,
 209, 214
 dingo (*Canis dingo*) 70
 direct use values 159–60, 161, 170
 Dirranbandi 127, 128, 129, 132
 diversion channels 220
 documentaries 123, 151–2
 Draft Water Management Plan, Cooper Creek
 1998 80, 156–7, 215
 dragonflies 70
 Dreaming 103
 dredging costs 166, 167
 drought 2006 114
 Dryland River Refugia Project 52
 dry periods 109
 farming and 137
 fish ecology 45
 Lake Eyre Basin 125
 Macquarie Marshes 146
 river flows and 139
 turtles and 56
 waterholes and 10, 60
 dunes 65
- eastern brown snake (*Pseudonaja textilis*) 71
 eastern long-necked turtle (*Chelodina longicollis*) 56–7,
 59
 ecological integrity 12, 232
 Condamine-Balonne Basin 141
 irrigation development threats to 153, 154
 maintenance of 217

- tourism and 125
- ecological knowledge, Aboriginal people 98
- ecological science 89, 155
 - exclusion of 156
- economic value per household model 161–4
- economic values
 - cotton irrigation 129
 - development and 231
 - environmental flows and 159–71
 - Georgina River and 104
 - maintenance of 111, 217
 - Murray–Darling Basin 162–9
- Egdbaston goby (*Chlamydogobius squamigenus*) 35, 37–8
- Egdbaston Springs 38, 40, 50
- Elizabeth Springs goby (*Chlamydogobius micropterus*) 35, 36, 37
- employment, tourism and 125, 126
- Emydura macquarii nigra* 58–9
- endangered species, fish 31, 36, 37, 50, 139
- energy use, Olympic Dam site 182, 183
- environmental allocations 215
- environmental assessment, minerals industries 189
- environmental costs, Olympic Dam site 182
- environmental damage
 - Culgoa River area 142
 - development and 63, 64
 - legislation and 235
- environmental flows 27
 - cessation 138
 - economic value of 167–8
 - irrigation reduction and 140
 - management of 216
 - Queensland government and 214
 - reduction of 132–3
- environmental impact assessments (EIAs) 206, 231
 - absence of 138, 187
- environmental legislation, Queensland
 - Government 198–200, 203, 221, 234
- environmental management 89, 90
- Environmental Protection Act 1994* (Qld) 157, 199, 201, 203, 210, 218
- Environmental Protection and Biodiversity Conservation Act 1999* (Qld) 31, 33, 201
- Environmental Protection (Underground Water Management) and Other Legislation Amendment Act 2016* (Qld) 201
- environmental science, Lake Eyre water resources 222
- environmental sustainability
 - development proposals and 235
 - economic benefits 159–71
 - Lake Eyre Basin rivers 229–34
 - long-term support for 237
- environmental threats
 - coal seam gas industry and 186–7
 - mining industry and 173–91
 - Murray–Darling Basin 109–10
 - shale gas industry 188
- environmental training, Aboriginal people 106
- environmental values
 - Lake Eyre Basin 237
 - river systems 12
 - water flows 167
- environmental water purchases 148
- Eromanga Basin 174, 175, 197
- erosion prevention 168
- Ethabuka Reserve 66, 68
- eucalypts, destruction of 12
- European exploration 4, 6
- European settlement, Aboriginal people and 104
- evaporation 14, 51
- existence value 160
- exploration licences, Queensland 186
- externalities 159
- extreme dispersal, fish species 50
- extreme rainfall events 65–6
- Eyre Creek xi, 9, 11, 103, 114, 196, 197
- farmers, Lake Eyre water resources and 222
- Farrars Creek 196, 197
- Federal Court 223
- feedlots 208
- feral cat (*Felis catus*) 14, 70
- feral cattle 105
- feral goats 234
- feral pig (*Sus scrofa*) 14, 70, 71, 105, 234
- feral rabbits 234
- financial capital, arid regions and 63
- Finlayson, HH 72
- fire risk, deserts 70
- Fisher family 148
- Fisheries Act 1994* (Qld) 200, 203
- fish populations 10, 11, 195
 - boom phase 49
 - Cooper Creek 43–54
 - flooding and 61
 - irrigation and 232
 - Queensland Lake Eyre Basin and 31–42
- flightless birds 3
- Flinders Ranges 8, 124
- flock bronzewing (*Phaps histrionica*) 70
- flood channels 219
- flooding 9, 19, 21, 24, 43, 48, 65, 189, 195
 - animal populations and 206
 - biodiversity and 108
 - Brenda Station 139
 - Cooper Creek 44, 49–50, 119–22
 - Culgoa River 137–43
 - development versus 230
 - disappearance of 129–30, 133
 - economic value 167
 - food sources and 56
 - frequency 25–6
 - Lower Balonne catchment 221
 - Macquarie Marshes 145–8
 - mining and 174
 - necessity for 45, 51–2, 126, 232
 - organic beef production and 114–15
 - turtles and 57, 58
 - value of 161
 - water flow reduction and 137–43
- floodplains 10–11, 20, 43, 44, 108, 109, 154
 - beef production 113–15
 - connectivity 208
 - cotton growing and 78
 - development restrictions and 206
 - fish and 61
 - flow harvesting 219

- future of 214
- Georgina–Diamantina catchment 197
- grazing and 82, 142
- inundation 56
- Lake Eyre Basin 8
- landholders and 107
- Lower Balonne River 127–35, 225
- management 219–20, 224, 235
- protection of 100, 216, 217
- scientific report 141
- threats to 221, 230, 232–3, 237
- transmission losses and 21–3
- floods 1974 154
- floods 1983 137
- floods 2000 50, 120, 123
- floods 2010–11 89, 123, 124
- flotation mill 181
- flow allocations, abolition of 142
- flow diversion, threat of 56
- flow fraction 22
- flow paths 21, 23
- flow persistence 70–1
- flow variability 43, 108, 109
 - fish habitats and 52
 - maintenance of 91
- flow volumes 48, 86
 - changes in 24–5, 26, 51
 - ecology and 110
 - Macquarie River 146
 - management of 235
 - monitoring 28
- focus monitoring 89, 90
- food and fibre demands 64, 236
- food resources, Cooper Creek turtle 58
- forest products removal 206
- foxes (*Vulpes vulpes*) 14, 70
- fracking, *see* hydraulic fracturing
- Fraser Island 58
- free-flowing rivers objective 91
- freehold grants 202
- free-standing water, Cooper Creek turtle and 57
- freshwater animals 3, 104
- freshwater crab (*Austrothelphusa transversa*) 9
- freshwater lakes 8, 11
- freshwater turtles, Cooper Creek 55–62
- frogs 9, 70, 71
- frontier mining areas 177
- fugitive emissions, coal seam gas industry 187
- Fukushima nuclear accident 181
- future prospects
 - Kati Thanda–Lake Eyre tourism 126
 - Lake Eyre Basin 89–91, 109–11, 209–10
 - Lower Balonne system 133–4
- fyke nets 44, 48
- Galilee Basin 174, 175, 176, 186, 197
- gambusia (*Gambusia holbrooki*) 35, 37–8, 40
- gas exploration licences 176
- Gaslands* (Fox) 188
- gas reserves, Lake Eyre Basin 177
- gauging stations 19, 20–1, 204
- General Reserve (water) 204, 205
- general security licence 231
- geomorphic processes 206, 218
- Georgina–Diamantina catchment 7, 11, 85, 196, 197, 214, 215, 231, 235, 236
- Georgina–Diamantina Catchment Committee 207
- Georgina–Diamantina Catchment Management Plan 81
- Georgina–Diamantina Resource Operations Plan (ROPs) 205
- Georgina–Diamantina Water Resource Plan (WRP) 157, 203, 204
- Georgina River x, 9, 13, 21, 31, 33, 36, 38, 39, 40, 48, 65, 95, 99, 103, 104, 105, 107, 108, 113–14, 152, 170, 195–6, 198, 203, 204, 206, 209, 214
- germination events 77
- gidgee (*Acacia georginae*) 66
- Gippsland Basin 184
- glassfish (*Ambassis* sp.) 33, 34, 36, 44, 48, 50
- goannas 3, 14
- golden goby (*Glossogobius aureus*) 34, 36
- goldfish (*Carassius auratus*) 14, 38, 40, 43, 47
- gold mining 174, 175, 177, 181, 182
- Goodooga 127, 128, 130
- Goulburn–Broken Rivers 164
- governance, Queensland Wild Rivers legislation 213–27
- governments
 - cotton growing and 78
 - water resource developments and 234–7
 - see also* Australian Government; Northern Territory Government; Queensland Government; South Australian Government
- Goyder's Lagoon 4, 11, 36, 196
- grazing industry 6, 14, 64, 71, 167
 - cotton growing and 78
 - Cubbie Station water licences and 221
 - direct costs 236
 - economic value of 169
 - flooding and 161
 - floodplains and 137, 233, 234
 - irrigation threats to 129–30
 - Lake Eyre Basin water resources 82, 222, 224
 - mining threats to 178
 - river flows and 231
 - water licences and 131, 219
 - Windorah 88
- Great Artesian Basin 4, 7, 9, 50, 174, 203
 - fish ecology 31–42
 - sustainability 208
 - water access 205
- Great Artesian Basin Water Resource Plan (WRP) 205
- Great Dividing Range 8, 12
- Great Nowranie Cave 105
- greenhouse gas emissions
 - coal seam gas industry and 187
 - Olympic Dam site 182, 183
 - restrictions on 236
- gross economic value 169
- groundwater 7, 22, 98, 189, 205
 - access to 207
 - coal seam gas industry and 186–7
 - contamination 70
 - minerals industries and 197
 - policy 98
 - regulatory mechanisms 203
 - shale gas industry and 188

- GVK Hancock Coal partnership 176
 Gwydir River 164, 165
- Hamilton River 104, 114, 196, 197
 Heads of Agreement 1997 216
 'heads of power' 206
 'Heart of Australia' poster 88–9
 heat waves, climate change and 110
 heavy metals 178
 Hebel 127, 128, 129
 hedonic pricing 161
Henry V (Shakespeare) 152, 158
 herons (*Ardea* sp.) 11
 highly endangered species, fish 37
 High Preservation Areas (HPAs) 157, 206, 207, 208, 210, 217, 218
 historical land connections, Aboriginal people 92–106
 Hobbs, Howard 156
 household willingness to pay model 161–4
 house mouse (*Mus musculus*) 70, 71
 Hunter Valley 116, 176
 hydraulic fracturing (fracking) 152, 186, 188, 197
 support for 209
 hydrological modelling 141
 Cooper Creek 154–5
 Lake Eyre Basin 19–21, 28, 235
 river flows 204
 hydrological processes 44, 51, 206, 218, 232
 Hyrtl's tandan (*Neosilurus hyrtlii*) 33, 34, 44, 45, 46, 48, 49, 50
- ibis (*Threskiornis* sp.) 11
 impoundments 51
 in between flows 9
 Inca Creek 183, 184
 Indigenous people
 floodplains and 114, 115
 water legislation and 215
 Wild Rivers declarations and 218
 see also Aboriginal people
 Indigenous Protected Areas (IPAs) 63
 Indigenous rangers 89, 105, 106
 Indigenous Reserve (water) 204
 Indigenous rights, Lake Eyre Basin 215, 216
 indirect economic benefit 160, 161, 170
 Indjaldandi-Dhidhanu people 103
 industry water monitoring 19
 Initial Advice Statement 152
 Innamincka 7, 8, 12, 20, 24, 57, 119, 124, 125, 176, 195
 Institute for Wildlife Research 156
 instream structures 206, 208
 integrated catchment planning 78, 83
 intensive agriculture, threat from 153
 interannual variability 24, 25, 26
 intergovernmental coordination, Lake Eyre Basin 85–7
 intermediate egret (*Ardea intermedia*) 145
 intermittent river flows 50, 119–22
 internal drainage, Lake Eyre Basin 43
 International Ecological Conference 1996 156
 International Riverprize 2015 x, 7, 14, 78, 91, 237
 international tourism 124
 introduced species 40, 233, 234
 inundation, Lake Eyre Basin 77
 invasive species 87, 105, 207, 230, 233
 alien 35, 38–9, 40, 43, 47, 50, 233
 control of 85
 Culgoa floodplain and 139
 fish 38–9
 springs and 37
 threat from 14, 71
 invertebrates 9, 71
 turtles and 56, 57
 iron ore 175
 irrigation 6, 12, 13, 26–7, 51, 64, 128, 138, 197, 209, 215
 economic costs 167, 169, 170
 habitat destruction and 70–1
 management of 71, 72
 prohibition 83, 215
 promotion 88
 Queensland regulations 204
 threats from 110, 121, 126, 207, 208, 223
 water diversion and 230, 232
 irrigation development 78, 79
 Condamine–Balonne Basin and 141–2
 Cooper Creek and 151–8
 expansion of 134
 Flinders River 234
 Lower Balonne catchment and 127–35, 220, 221
 Macquarie Marshes and 145–8
 Murray–Darling Basin 137–8
 opposition to 216, 225
 proposals 78, 84, 99, 100, 101, 215, 216, 222
 Queensland rivers 203, 204, 205
 St George River 219
 threats from 127–35, 152, 155
 irrigation diversion, costs 159
 irrigation licences, increase 222
- Jack Taylor Weir 139, 219
 Jones family 148
 Jones, Kate 157
Judicial Review Act 1991 (Qld) 216, 221
- Kati Thanda–Lake Eyre v, 3, 7, 8, 11, 33, 43, 55, 101, 107, 108, 109, 114–15, 195, 196
 conservation partnerships and 78
 flooding events 151–2
 sustainable economics of 123–6
see also Lake Eyre Basin
- Keating, Paul 115
 Kevin's Corner coal mine 176
 Kidman, Sidney 6, 115
 King Creek 196, 197
 Kingsford, Richard 156
Koowarta v State of Queensland (2014) 223–4
 Kruse family 119–20
 Kurrithala Tjimpa (Black Hawk) 95
 Kyabra Creek 33, 154, 195
- Labor Government (Qld) 82, 83, 98, 157, 198, 200, 205, 207, 215
 Lachlan River 121, 164, 165
 Lady Annie copper mine 13, 174, 182–4, 236
 pollution from 161, 232

- Lake Alexandrina 168
 Lake Blanche 4, 8
 Lake Callabonna 4, 8
 Lake Dunn 4, 57, 59
 Lake Eyre Basin x, 65, 70, 71, 72, 107–11, 121, 155
 Aboriginal historical connection 92–106
 coal seam gas industry and 186–7
 conservation partnerships 77–93
 economic values and 159–71
 fish species 50
 floods 1975 120
 future prospects 109–11
 intermittent river flows 119–22
 mineral and energy resources 173–91
 organic beef production 114
 rivers management 195–211
 river sustainability 229–39
 see also Kati Thanda-Lake Eyre
 Lake Eyre Basin Aboriginal Forums 81, 87, 97, 98, 99, 215
 Lake Eyre Basin Aboriginal Way 89
 Lake Eyre Basin Authority 98, 99
 Lake Eyre Basin Coordinating Group 80, 86, 215
 Lake Eyre Basin Heads of Agreement 80, 85–6
 Lake Eyre Basin Intergovernmental Agreement 79, 80, 81, 83, 86, 88, 90, 91, 110, 195, 215, 224, 234–5, 237
 Lake Eyre Basin Ministerial Forum 81, 215
 Lake Eyre Basin Partnership 7, 14, 78, 237
 Lake Eyre Basin People and Passion 89
 Lake Eyre Basin Rivers Assessment (LEBRA) 21, 31, 87, 89, 90, 98–9
 Lake Eyre Basin Secretariat 79
 Lake Eyre Basin Steering Group 80, 84–5
 Lake Eyre Basin Under the Spotlight Conference 82, 88
 Lake Eyre Basin Wild Rivers Advisory Board 82, 215, 222–3
 Lake Eyre Biennial Conference 87
 Lake Eyre golden perch (*Macquaria* sp. B) 46
 Lake Eyre hardyhead (*Craterocephalus eyresii*) 34, 36, 50
 Lake Galilee 4, 11
 Lake Gregory 4, 8
 Lake Machattie 4, 5, 11, 196
 Lake Nash (Alpurrurulam) 103, 105
 Lake Yamma Yamma 4, 11, 195
 Land Act 1994 (Qld) 202, 203
 Landcare 85
 Land Court 200, 221
 landholders
 irrigation development impact on 146
 Lower Balonne catchment 221
 river sustainability and 107–11, 121
 language groups 95
 La Niña 8, 24
 large flow events 27
 large off-river storages 236
 large-scale development, small-scale development versus 232
 large scale irrigation 231
 prohibition of 209
 large-scale mining 207
 lead–zinc–silver mining 175, 177, 178, 180, 196
 leasehold lands grants, Queensland 202
 legislative framework
 irrigation development 131–2
 Lake Eyre Basin 40, 213–14
 Queensland 198–202
 Leigh Creek 175, 176
 Liberal National Government (Qld) (2012–15) x, 82, 83–4, 88, 99, 100, 101, 121, 133, 152, 156, 157, 198, 199, 200, 201, 202, 206–9, 215, 218–19, 223, 225, 232
 lignum (*Duma florulenta*) 131, 139
 liquefied petroleum gas (LPG) 175, 186
 livestock grazing 105, 159
 local extinctions, turtles 60
 local government 85, 201, 207
 floodplain management and 220
 Lochern National Park 57, 60
 Lockyer, Paul ix, 151
 locust (*Chortoicetes terminifera*) 70
 Loddon–Avoca Rivers 164, 165
 longevity, freshwater turtles 61
 long-haired rat (*Rattus villosissimus*) 70, 71
 Longreach x, 3, 6, 12, 38, 39, 82, 88, 107, 160, 174
 Longreach conference 229–30
 Longreach Waterhole Relocation Zone 196, 204
 long-term costs, lack of accountability 234
 long-term residents, river flows and 231
 Lower Balonne system 121, 214
 ecological degradation 141, 225
 floodplain flows 137, 138, 219–22
 irrigation threats to 127–35
 Lower Balonne Water Resource Plan 132
 Lower Cooper Creek 8
 Lower Lakes, Murray–Darling Basin 166, 167, 168
 low flows, irrigation and 153

 Mackellar, Dorothea 134
 McLaughlin, Colleen: ‘Song of the River’ (2006) 113
 McClelland family 148
 Macquarie–Castlereagh Rivers 164, 165
 Macquarie Marshes 50, 52, 152, 162
 upstream water diversion and 145–50
 Macquarie Marshes Environmental Landholders’ Association 148, 155
 Macquarie Marshes Nature Reserve 145, 147, 148
 Macquarie River 121, 145, 152
 McTainsh, Grant 156
 Macumba River 7, 21, 95
 mail services, Cooper Creek 119–20
 Main Branch 23, 24
 Malaysia 115, 189
 mammals, desert 66–70, 87
 management areas, Great Artesian Basin 205
 management failures, overdevelopment 231
 markets
 measurement techniques 161
 organic beef production 115, 117
 Maroulis, Jerry 156
 Marree 123, 126
 marsupial lion (*Thylacoleo carnifex*) 3
 Mary Kathleen uranium mine 174, 178
 Mayne River 196, 197
 medium floods, loss of 147
 megafauna 3

- megapit 181
- megatrends, Lake Eyre mining industry 177–84
- metals prices, decline 182, 183
- methane production
 - coal seam gas industry 186, 187
 - shale gas industry 188
- middens 96
- Mid-Murrumbidgee River Wetlands 168
- migratory fish species 36
- Miljoori (spoonbill) 95
- Millennium Drought 130
- Milson, Laddie 121
- Mineral and Other Legislation Amendment Bill 2016* (Qld) 200
- Mineral Resources Act 1989* (Qld) 157, 201, 203, 206
- Minerals and Energy Resources (Common Provisions) Act 2014* (Qld) 200, 203
- mineral sands 177
- mineral tenements 197
- mini-boom inflows 56
- mining accidents 182
- mining exploration 89
 - controls 206–7
 - environmental impact of 230
 - Lake Eyre Basin and 237
 - regulation of 157, 209
- mining industries 6, 63, 84, 85, 117, 197, 208
 - banning of 218
 - deregulation 209
 - economic costs 169, 170
 - employment 106
 - environmental costs 70–1, 110, 121, 126, 169–70
 - Lake Eyre Basin 173–91, 222
 - management of 71, 72, 224
 - Mount Isa field 179–80
 - proposals for 64, 101
 - protection from 223
 - Queensland legislative support 158, 217, 234
 - water resources and 13, 159, 205
- mining leases 200, 218
- Minister for Natural Resources (Qld) 79, 100, 156, 157, 216
- Minister for Natural Resources and Mines (Qld) 157, 207, 222, 223, 225
- Minister for the Environment (Qld) 223–4
- Minister for Water (Cth) 133
- Minister for Water Resources and Maritime Services (Qld) 219
- Ministerial Forum 86, 87, 98, 224
- Mitchell grass downs 65
- Mithaka 95, 101
- moderate rainfall periods 68
- monitoring 24
 - irrigation and mining activities 71–2
 - Lake Eyre Basin 27
- monitor lizards 105
- monsoon rains 8, 31, 43, 108
- Moonie River 164, 165
- mosquitofish (*Gambusia* sp.) 14, 37, 43, 47, 49, 50
- Mount Isa 63, 103, 174, 175, 176, 177, 178–80, 182
- Mount Lofty Ranges catchment 164, 165
- movement behaviour, fish 50
- Mowana (budgerigar) 95
- mud survival, Cooper Creek turtle 59
- mulga snake (*Pseudochis australis*) 70
- Mulligan River x, 31, 32, 33, 36, 48, 50, 196, 197, 214
- Multhuri (pelican) 95
- multi-well sites 218
- Mulkerran (white ibis) 95
- Murray cod (*Maccullochella peelii*) 38, 40, 43
- Murray–Darling Basin x, 6, 19, 27, 33, 38, 39, 40, 43, 48, 50, 52, 78, 79, 80, 82, 83, 100, 109–10, 127, 131, 137, 145, 154, 156, 159, 231, 232–3
 - comparisons with Lake Eyre Basin 219
 - economic value 162–70
 - irrigation and 12, 13, 129
 - threats to 121
- Murray–Darling Basin Plan 132, 133, 134, 142, 147–8, 167–8, 235
 - economic values and 163
- Murray River 121, 128, 134, 161, 162, 164, 165, 166
- Murray River turtle (*Emydura macquarii*) 57
- Murrumbidgee River 71, 164, 165
- Nappa Merrie gauge 22, 154, 164, 165, 204
- nardoo (*Marsilea drummondii*) 3, 4, 6, 104
- Narran Lake system 127, 130, 133, 137, 141, 219, 221
- National Centre for Aboriginal Water Research 98, 99
- National Heritage Trust 85, 235
- National Parks and Wildlife Service (NSW) 148
- National Party (Qld) 156, 219
- National Water Initiative 2004 213, 215
- National Water Reform Framework 1994 216
- native fish populations 43, 162, 165, 166, 167
 - Cooper Creek 44
 - improvement of 163, 164
 - Lake Eyre river basin 34
 - river flows and 231
- native mammals, decline of 63
- native millet (*Panicum decompositum*) 128
- native rodents 66, 71
- native vegetation
 - clearing controls 206
 - improvement of 163, 165
- natural flows
 - Cooper Creek basin 43–54
 - irrigation and 209
 - protection of 207, 208, 218, 223, 225
- natural habitat
 - degradation of 12, 40, 51, 230
 - fish species 33–6
 - fragmentation of 71
 - protection of 218
- natural irrigation 108
- natural justice, environmental policy and 209
- natural resource management 91
 - Lake Eyre Basin 197, 225
 - Queensland legislation 201
- natural resources management groups 207
- Nature Conservation Act 1992* 31
- Neal, Don 219
- Neales River x, 7, 8, 21, 24, 25, 26
- Newman, Campbell 152, 157, 207
- New South Wales 7, 33, 40, 59, 127, 132, 133, 137, 138, 141, 152, 162, 195, 220
- New South Wales Government 139, 146, 148
 - flow diversion and 149
 - irrigation developments 141–2

- no-flow recruitment strategies 45, 50
no-flow spawning 46, 47
non-freehold land management 202
non-use values 159–61, 169, 170
Murray–Darling Basin 164, 167
North America 55, 115
Northern Basin Review 133, 134, 139, 142, 148
Northern Territory v, 7, 31, 37, 40, 78, 79, 81, 195,
196, 224
Northern Territory Government 81, 86, 87, 110, 195,
234
north-west ambassis (*Ambassis* sp.) 44, 46
North-west Branch 23, 24, 25
nuclear weapons, rare earths mining and 189
- observed water level 26
off-river storages, banning of 204
oil prices, shale gas industry and 188
Olsen, Mike 156
Olympic Dam Mine 174, 177, 181–3
Oodnadatta 120, 126
open cut mines 178
controls of 208
Lady Annie Mine 182
Mount Isa 179
prohibition of 215
ore milling, Mount Isa 180
organic production, beef industry 113–17
overland flows 131–2, 205, 208
overnight visitor numbers, Murray–Darling Basin
166
- Palmer, Clive 176
parkinsonia (*Parkinsonia aculeate*) 14
Paroo River 155, 164
participatory process, dilution of 217
pastoral industry 63, 85, 89, 105, 153, 196
Channel Country 151
Great Artesian Basin and 205
introduced species and 70
Lake Eyre Basin 160
river flows and 19
World Heritage Listing and 80
Pedirka Basin 174, 175, 176
pelicans 3, 5, 95, 97
‘people and place’ 88
Perth 124, 215
Petroleum Act 1923 (Qld) 202
petroleum and gas industry 100, 106, 117, 152, 158,
174, 176, 184–6, 187, 197, 208
deregulation 209
floodplains and 232
Lake Eyre Basin 222
limitation of 217
research 157
water management 205
Wild Rivers legislation and 218
Petroleum and Gas (Production and Safety) Act 2004
(Qld) 202, 203, 206
pipelines 218
pitfall traps 66
Planning Act 2016 (Qld) 199
plant food 104
plant germination 11
- plant pests 236
pollutants 13, 230
Lady Annie Mine 161
Mount Isa 179
prevention of 85, 236
Port Augusta 87, 126, 176
predation 38–9, 71
preference measurement techniques 161
prickly acacia (*Vachellia nilotica*) 14, 233
private gain, public cost versus 231
private storages, Balonne River 129
production losses, Brenda Station 139
production resources 2013, minerals and energy 175
production totals, Olympic Dam 182
Projects of State Significance (Queensland) 203, 204
property values 161, 168
public participation 209, 213, 214
Puckridge, Jim 156
pumped water, Lower Balonne River catchment 210,
219, 236
- quarry materials removal 206
Queensland v, x, 7, 33, 36, 38, 40, 64, 65, 68, 78, 79,
80, 81, 82, 84, 85, 107, 114, 126, 127, 132, 133, 137,
138, 139, 151, 154, 155, 169, 176, 177, 184, 185, 186,
195, 196, 197, 205, 214, 232
coal seam gas (CSG) industry 186–7, 189
fish ecology 31–42
policy changes 89
Queensland Conservation Council 155
Queensland Cotton Industry Policy Council 155
Queensland Government 13, 19, 64, 79, 80, 81, 82, 85,
87, 97, 110, 131, 137, 139, 195, 216
irrigation industry and 131–2, 141–2, 155
legislative framework 198–202
mineral exploration licences 186
water resource management and 203, 214, 231,
234, 235
Wild Rivers legislation 213–27
Queensland Water Commission 214, 219
- radioactive wastes 178, 188, 189
rainbowfish 48, 50
rainfall events 1991–2011 66
rainfall patterns 14, 20
climate change and 236
desert channel country 65
Ethabuka Reserve 68
variability 55, 68, 69
Ramsar Convention listing 23, 127, 130, 137, 145,
200, 221
rare earths oxides (REOs) extraction 175, 177, 178,
181, 188–9
recreational fishing 38, 44
recreation industries 63, 159
recreation values 161, 165, 166, 168, 169–70
recruitment strategies
fish 45, 48
turtles 60
red claw crayfish (*Cherax quadricarinatus*) 14, 39, 40,
105, 233
redfin (*Perca fluviatilis*) 38
red-finned blue-eye (*Scaturiginichthys*
vermeilipinnis) 35, 37–8, 50

- Red List of Threatened Species 31, 33
 refuge habitats 10, 51, 66, 69, 110, 154, 195, 233
 regional bodies, Lake Eyre Basin 85
 Regional Interests Development Approval (RIDA) 199
Regional Planning Interests Act 2014 (Qld) 64, 199, 203, 224
 rehabilitation
 minerals industry and 178, 184, 189
 Murray–Darling system 231
 Reid, Julian 156
 replacement water sources 161
 resource access, Queensland legislation 203
 Resource Operations Plans (ROPs) 131, 203–4
 resource potential, Olympic Dam 181
 responsibility sharing 88
 ridge-tailed goanna (*Varanus acanthurus*) 105
 Rinehart, Gina 176
 ringed brown snake (*Pseudonaja modesta*) 70
 riparian terrestrial fauna, protection of 207
 riparian vegetation
 protection of 44, 218
 Wild River declaration 206
 river champions, Lake Eyre Basin 77–93
 river cooba (*Acacia stenophylla*), destruction of 139
 river flows 20
 developmental proposals and 89
 management 19–29, 90
 reductions 161
 St George River 128
 variability 9, 12
 river gum (*Eucalyptus camaldulensis*), destruction of 139, 147
 River Murray
 economic values and 163
 flow increase 168
 rivers
 Aboriginal tribes and 104
 assessment monitoring 82
 costs 231
 development lobbyists 237
 fish ecology and 31–42
 irrigation and 209
 Lake Eyre Basin 3–18, 195–211, 229–39
 protection of 207
 roads, habitat destruction and 70
 Roberts, Brian 156
 Robertson, Stephen 157, 223
 roly-poly (*Sclerolaena muricata*) 139
 Roxby Downs 181
 rubber vine (*Cryptostegia grandiflora*) 14
 rufous night heron (*Nycticorax caledonicus*) 11, 145

 sacred places, caves 105–6
 Saga Creek 183, 184
 St George 127, 128, 129, 131, 138, 139
 salinity
 costs 166, 167, 168
 shale gas industry and 188
 variations in 11
 sampling, fish catches 49
 sandy inland mouse (*Pseudomys hermannsburgensis*) 66, 68, 69
 Santos Limited 19, 184, 186

 Scientific Advisory Panel 79, 81, 84, 86, 87, 91, 207, 215, 224
 scientific research 98
 cotton growing and 78
 irrigation development and 141, 147–8
 Lake Eyre Basin and 89, 237
 water resource plans and 203
 scientific workshop, Windorah 156, 215
 seasonal recruitment strategy 45, 48
 seeds 66, 67
 seismic activity, fracking and 188
 setback distances 206
 Shakespeare, William 152, 158
 shale gas industry 174, 176, 187–8, 189, 197
 sheep industry 6, 128, 137
 silver production 180, 181, 182
 silver tandan (*Porochilus argenteus*) 33, 34, 44, 45, 46, 48, 49, 50
 Simpson Desert 31, 33, 65, 66, 67, 68, 196
 sinkholes 105–6
 ‘ sleeper ’ licences (water) 100, 156, 204, 209, 210, 221, 231, 232, 236
 sleepy cod (*Oxyeleotris lineolata*) 14, 35, 39, 40, 43–4
 small flow events 27
 small mammals 66, 71
 small-scale irrigation 210, 231
 large-scale development versus 232
 promotion of 100, 121, 209
 Queensland government and 207, 209
 snakes 70
 Snowy Mountains Hydroelectric Scheme 12, 164
 social justice principles 85
 solar power generation 125
 solution ponds, failure of 183
 ‘ Song of the River ’ (2006) (McLaughlin) 113
 South Australia 3, 7, 8, 20, 22, 23, 36, 37, 40, 78, 79, 80, 85, 91, 99, 104, 110, 114, 123, 126, 151, 158, 176, 181, 184, 185, 195, 200, 204, 206, 215, 222
 South Australian Arid Lands Natural Resources Management Board 78, 79
 South Australian Government v, 19, 31, 80, 81, 85, 87, 195, 216, 234
 spangled perch (*Leiopotherapon unicolor*) 33, 34, 36, 44, 47, 48, 49, 50
 spatial variability, river flows 20–4, 27
 Special Floodplain Management Areas (SFMA) 157, 206, 207, 208, 210, 217, 218
 spinifex (*Triodia basedowii*) 66
 spinifex hopping-mouse (*Notomys alexis*) 66, 67, 68
 ‘ Spotlight on Lake Eyre Basin ’ conference 229–30
 spring populations, threats to 31–42, 47
 Springvale springs 31, 32, 36
 stakeholders 88, 91, 97, 178, 213, 215, 222
 State Development and Public Works Organisation Act 1971 (Qld) 198, 199, 203, 217, 218
 State Development, Infrastructure and Planning (Red Tape Reduction) and Other Legislation Amendment Act 2014 (Qld) 198, 209, 224
 stated preference measurement techniques 161–2
 State of the Basin Report 2008 82, 87
 status quo, Lake Eyre Basin policy 217, 235
 statutory environmental controls 203, 210, 217
 Stevenson v Wenk (1992) 220, 221
 stewardship values 115, 160

- stock-carrying capacity, loss of 139
- stone arrangements, Barcoo River 77
- Stonehenge 39, 120
- Strategic Adaptive Management 82, 89–90, 91
- Strategic Environmental Areas (SEAs) 199, 224
- Strategic Reserve (water) 204, 205
- straw-necked ibis (*Threskiornis spinicollis*) 145, 146
- Strzelecki Creek 8, 23
- Stuart Shelf 174, 175, 176
- Sturt, Charles 6
- summer fish spawning 46, 47, 48
- Supreme Court, Lower Balonne water licences
and 220–1
- Surat Basin 174, 185, 186, 201
- surface mining 70, 206, 209
- surface water quality 189, 197, 207, 208
- survey parties 63
- sustainability 14, 85
- cattle production and 115–17
 - future of 89–91
 - landholders and 107–11
 - turtle populations 60–1
 - water access and 78–84
- sustainability reports, lack of 182
- sustainable development
- Kati Thanda-Lake Eyre 123–6
 - Lower Balonne River system 131–2
 - Queensland Government and 207
- Sustainable Planning Act 2009* (Qld) 157, 199, 201, 203, 208
- sustainable technology, coal seam gas (CSG) production
versus 186
- sustainable values (list) 207
- sustainable water use management 173, 216
- Sutherland, John 104
- Sydney 124, 160
- Sydney Harbour 138, 220
- tadpole shrimps (*Triops australiensis*) 9
- temperature increase, climate change and 233, 236
- temporal variability, river flows 24–7
- terrestrial animals, river flows and 231
- Territory Natural Resource Management 79, 89
- Thomson River 6, 8, 12, 20, 22, 33, 36, 38, 39, 43, 80, 107, 108, 114, 120, 121, 160, 161, 195, 196, 215, 234
- thorium 189
- Tibooburra Declaration 2011 97, 98, 99, 215, 222, 223
- Ticehurst, Gary 151
- tight gas projects 174, 176, 177, 197
- Tilapia* sp. 40
- Timms, Brian 156
- Torrens Towerhill Zone 195, 196
- total economic value 160, 161–2
- tourism 6, 63, 78, 117, 124–5, 160–1
- direct costs 236
 - economic value of 168, 169
 - environmental impact 104, 234, 237
 - waterholes and 14
- tourism operators 85, 89, 155, 222
- towns, Lake Eyre Basin 3, 4, 224
- trade offs 213
- trade routes, rivers as 97, 104
- Traditional Owners x, 89, 153
- Aboriginal Forum and 98
 - cotton growing and 78
 - Lake Eyre Basin and 100, 101, 103, 213, 223, 225, 229, 237
 - Rivers Assessment and 99
- translocated fish species 35, 43
- Transport Infrastructure Act* (Qld) 206
- trap-night 66, 68
- travel cost approach 161
- turtles 10, 49, 51
- river flows and 231, 232
- Uluru 63, 116
- unallocated water rights 205, 236
- unconventional gas–petroleum extraction 176, 177, 185, 187–8, 189, 207
- underground mines 181
- underground water 105–6, 116, 201
- unemployment, cotton irrigation and 131
- ungauged rivers 154
- United States of America (USA) 124, 187–8, 189
- Unmack, Peter 37
- unregulated rivers, Queensland 64
- upstream water resources, threats to 78
- uranium mining 175, 177, 181, 182, 189, 197
- use values 159–61, 167, 168, 169
- vegetation
- flooding and 66, 140
 - Macquarie Marshes 146
 - value of 161, 162
- vegetation destruction
- Culgoa River 139
 - Lower Balonne system 133
 - water flow reductions and 131, 140
- Vegetation Management Act 1999* (Qld) 200, 203
- vision objectives, Lake Eyre Basin 90, 91
- vulnerable species, fish 31, 36
- Waanyi 104
- Wahlduru 95
- Wangkumarra 101
- Waratah Coal 176
- Warrego River 164, 165
- waste disposal 70, 188
- water access, Queensland regulations 204–5
- Water Act 2000* (Qld) 155, 157, 158, 198, 201, 203, 208, 210, 213, 215, 216, 217
- Water Act 2007* (Qld) 235
- Water Allocation Management Plan (WAMP) 131, 141
- water allocations
- Aboriginal people and 98
 - Queensland 141
- waterbirds 3, 11, 61, 145, 159, 195, 206
- breeding 162, 163, 165, 166, 167
 - decline of 139
 - habitat 221
 - rainfall events and 70, 130–1
- water buy-back 210
- water carting, Culgoa River 139
- water conflicts 104, 106
- water contamination 186, 223, 232
- water couch (*Paspalum distichum*) 145
- water diversion and extraction 12, 26–7, 111, 141–2, 148

- Condamine–Balonne system 132
- Lake Eyre Basin 230
- Olympic Dam site 183
- Queensland 218, 219
- threats from 121
- turtles and 61
- water flows
 - Culgoa River catchment 137–43
 - Kati Thanda–Lake Eyre 5
 - Mount Isa complex 180
 - Murray–Darling Basin 163–4
 - protection of 86, 101
 - turtles and 61
- water governance, Wild Rivers legislation 213–27
- water harvesting licences 51, 131, 132, 156
 - embargo 1992 138
 - Lower Balonne catchment 222
 - management of 142
- waterholes 10, 14, 33, 43, 44, 45, 50, 51, 95–6, 109, 110, 154, 195
 - connectivity 217
 - future of 51, 214
 - turtles and 55, 57, 58, 59–60
 - viability 232
- Water Legislation Amendment Act 2016* (Qld) 198
- water licences 121, 146, 204
 - Cooper Creek floodplain 152
 - Lower Balonne River catchment 219–20
 - trading 231–2
 - see also* water harvesting licences
- water lilies (*Nymphaea georginae*) 104
- water management 27, 117, 203
- Water Management Plan (Cooper Creek) 2000* (Qld) 155, 157, 216
- water quality
 - mines and 178, 182–4
 - protection of 218
 - Wild Rivers declaration 206
- Water Reform and Other Legislative Amendments Bill 2014* (Qld) 198
- water remoteness 71
- Water Resource (Condamine and Balonne) Plan 2004* (Qld) 221–2
- water resource development 216, 230
- water resource management, Lake Eyre Basin 213–27
- Water Resource Plans (WRP) 131, 155, 157, 203–4, 215, 216
- Water Resources Act 1989* (Qld) 215, 216, 217, 219, 221
- water run-off 20, 22, 26, 56
- water scarcity x, 110
- water storages 139, 210
- water transmission losses 21–2, 154
- water usage 139, 206
 - Lower Balonne catchment 221–2
 - mining and 173, 182, 189
 - water volume demand, irrigation proposal 154–5
 - waterways, Aboriginal people and 103–6
 - weeds 70, 207
 - Weilmoringle 127, 128, 130
 - weir building 12, 13
 - Welch's grunter (*Bidyanus welchi*) 33, 34, 36, 45, 47, 48, 50
 - Welford, Rob 157
 - Wenck, Judge 221
 - western brown snake (*Pseudonaja nuchalis*) 70
 - Western Rivers Advisory Panel (WRAP) 99, 158, 207, 222
 - Western Rivers catchments 196, 197, 215, 216, 224, 225
 - wetlands 4, 7–8, 25, 154, 159, 195
 - fish species 37
 - protection of 207, 217
 - wildlife corridor function 206
 - Wild Rivers Act 2005* 64, 82, 83–4, 92, 97, 98, 99, 157, 158, 198, 199, 203, 205–6, 210, 213–27, 234, 235
 - declaration 157, 198, 205–7, 216, 217–18, 222, 223, 224, 225
 - revocation 99–100, 101, 105, 106, 152, 207–9, 223
 - Wild Rivers Advisory Board (Qld) 97
 - Wild Rivers Code 208, 218
 - Wild Rivers values 223
 - Wiliyan-ngurru (Camooweal Caves National Park) 105
 - William Creek 123, 124
 - Wills, William John 4, 6
 - Willyama (Mount Isa) Block 174, 175
 - Wilson River 33, 154, 195
 - Wimmera River 164, 165
 - Windamere Dam 145
 - Windorah 7, 8, 11, 22, 49, 58, 65, 78, 79, 88, 95, 96, 108, 114, 152, 153, 195, 203, 209, 215, 231
 - Windorah Conference 2008 121
 - Windorah–Nappa Merrie reach 27, 44
 - Windorah Scientific Workshop 1996 156
 - wine industry, organic 116
 - winter spawning 47, 48
 - Winton 3, 12
 - World Heritage listing, Lake Eyre Basin 79, 80, 84, 115, 215, 216
 - Yandruwandha people 3
 - yellowbelly (*Macquaria* sp.) 33, 34, 38–9, 45, 46, 48, 49, 50, 52
 - yellow-billed spoonbill (*Platalea flavipes*) 10
 - zero flow periods 19
 - zinc mining 175, 177, 180