

Index

A

Acetylcholinesterase, 254, 255
Achnanthydium minutissimum, 67, 156
Achnanthydium pyrenaicum, 74
Acipenser sturio, 106, 107, 114, 133
Aclonifen, 279
Alien species, 37
Alkylphenol ethoxylates (APEO), 295
Alosa fallax, 106, 114, 133
Alternative Prague approach, 201
AMBI, 152
Ammonium, 20
Amphetamine, 296
Amphipod assay, 257
Amphora pediculus, 74
Analytics, methods, 269
Anguilla anguilla, 40, 114, 118, 133
Annual averages environmental quality standards (AA-EQS), 270
Ardea purpurea, 255
Artificial water bodies (AWB), 202
Arundo donax (giant cane), 92, 93, 258, 259
Assessment, 94
Azolla filiculoides, 92

B

Banyoles lake, 18
Barbatula quignardi, 113
Barbus graellsii/Luciobarbus graellsii, 45, 106, 117, 133, 254
Barbus haasi, 106, 110, 118, 133
Barbus meridionalis, 106, 110, 113, 117, 133, 255

Bentazone, 258
BENTIX, 152, 159
Benzoylcegonine, 294
Besós, 68, 249
Bifenox, 279
Bioassessment, 1, 65, 74, 112, 150
Biocontamination, 37, 39
Biodegradation, 297
Bioindicators, benthic, 152
Biological indices, 37, 101, 249
Biological quality elements (BQEs), 3, 53, 67, 250
Biological quality indicator (BQI), 55
Biological quality indices, 13
Biomarkers, 249, 253
Biomonitoring tools, 251
Biopollution, 37, 40
Biopollution level index (BPL), 39, 47
Biotic integrity, 125
Boadella reservoir, 211
BOPA, 159
Bryophytes, sensitive, 91

C

Cadmium, 15, 254
Caffeine, 294
Calcareous Mediterranean mountain rivers, 76
Catalan basins, 3, 37
Catalan River Basin District (CRBD), 1, 4, 221, 232
Catalan rivers, 65
Catalan Water Agency (ACA), 1, 5, 231
Catalase, 258

- Catalonia, 81, 125
 Channelling stretch measurement, 237
Chelon labrosus, 117
 Chemical Monitoring Activity Exercises (CMA on-site), 272
 Chemical risk, 298
 Chemical status, 1, 24, 269
 Chironomidae, 171, 183
 Chloride, 20, 204, 205
Cinclidotus fontinaloides, 91
 Clarithromycin, 296
 Coastal lagoons, 18
 Coastal waters, 19
Cocconeis pediculus, 74
 Coefficients of conservatism (C-values), 84
 Common Implementation Strategy (CIS), 203
 Concentration addition (CA), 25, 299
Cratoneuron filicinum, 91
 Crustaceans, 171, 174
 Cyanobacteria, 92, 207–211
 Cyanotoxins, 210
 Cybutryne, 279
Cyclotella meneghiniana, 67
Cymbella excisa, 72
 Cypermethrin, 279
Cyprinus carpio, 45, 107, 108, 207, 214, 253–255, 260
 Cytochrome P450, 254
- D**
Daphnia, 255, 283
 DDT, 254
Denticula tenuis, 72
 Detergents, 164
Diatoma ehrenbergii, 74
 Diatoms, 65, 149, 154
 Dichlorodiphenyltrichloroethanes, 254
 Dichlorvos, 279
 Diclofenac, 293
 Dicofol, 279
 Di(2-ethylhexyl)-phthalate (DEHP), 276
 DNA, omics, 260
 Doñana National Park (SW Spain), 92
Dreissena polymorpha, 215, 261
 Drugs of abuse, 25, 283, 286, 294, 311
- E**
 Ebro, 4, 249
 estuary, 152
 ECELS, 171, 190
 Eco-hydromorphology, 221
 Ecological indicators, 126, 149
 Ecological potential (EP), 206
 Ecological quality ratio (EQR), 189
 Ecological status (ES), 1, 22, 29, 101, 212, 241, 249
 Ecosystem health, 125
 Ecotoxicity, 25, 283, 299, 314
Egretta garzetta, 255
 Electrofishing, 127
 Emerging contaminants, 24, 283, 295
Encyonema silesiacum, 67
Encyonopsis microcephala, 72
 Endosulfan, 17, 278
 Environmental flow compliance (EFC), 234
 Environmental quality standards (EQS), 7, 24, 269
 Ephemeroptera, Plecoptera, Trichoptera (EPT), 22
 EQAT, 171, 173, 183, 190, 193
 Escales reservoir, 204
 Estrogenic compounds/effects, 252, 254, 293
 Estuaries, 3, 149–156
 highly stratified (salt-wedge), 149
 quality paradox, 165
 river-dominated, 149
 7-Ethoxyresorufin *O*-deethylase (EROD), 254
 Ethylhexyl methoxycinnamate (EHMC), 293
 European Fish Index (EFI), 103
 European Inventory of Existing Commercial Chemical Substances (EINECS), 284
 Eutrophication, 70, 87, 108, 151, 153, 172, 204, 213
 Expert judgment, 203
 Expressed sequence tags (ESTs), 261
- F**
 Fenitrothion, 255, 258
 Field bioassays, 249, 256
 Fish, 3, 7, 11, 15, 25, 40, 67, 90, 101, 283, 299, 303–313
 bioindicators, 102
 biotic index, 125
 indices, 132
 migration, 113
 passes, 113
 Fish-based Assessment Method for the Ecological Status of European Rivers (FAME), 103
 Flame retardants, 25, 263, 283, 286, 314
 Flix reservoir, 205, 215
 Floodplains, 84, 237
 land use, 237

Floristic quality assessment index (FQAI), 81, 84
 Fluorescent hydrocarbon compounds (FACs), 255
 Foix reservoir, 205
 Freshwater fish, 101

G

Gemfibrozil, 293
 Genes, expression/analysis, 261
 Geographical Intercalibration Groups (GIG), 74
 Glutathione, 259
 Glutathione-S-transferase, 258
 Glyphosate, 258, 259, 264
Gobio lozanoi, 45, 106, 109, 118, 133
Gomphonema clavatum, 67
Gomphosphaeria sp., 210
 Gonadosomatic index (GSI), 253
 Good ecological potential (GEP), 202
 Groundwater, 1, 20, 27, 150, 190, 276

H

Habitat condition, 171
 Habitat modification score (HMS), 228
 Habitat Quality Assessment Index (HQA), 228
 Harmonization, 271–275
 Hazard quotient (HQ), 25
 Heavily modified water bodies (HMWB), 201
 Heavy metals, 10, 15, 17, 18, 92, 105, 151, 165, 254, 262, 263, 303
 Heptachlor/heptachlor epoxide, 279
 Herbolox, 259
 Hexachlorobenzene, 254
 HIDRI, 221, 228
 Hormones, 283, 286, 289, 293
 Human pressure, 101
 Hydrodynamics, 223
 Hydrology, 26
 Hydromorphology (HYMO), 21, 221, 223, 240
 assessment, 221
 Hydropsyche exocellata, 259

I

Iberian Average Score Per Taxon (IASPT), 22
 Iberian Biological Monitoring Working Program (IBMWP), 22, 91, 159
 IBICAT, 53, 111
 IBIMED, 143
 Ibuprofen, 293
 Independent action (IA), 25, 299

Index de Habitat Fluvial (river habitat index) (IHF), 91
 Index for Hydrogeomorphological assessment (IHG), 224
 Index of hydrological alteration (IHA), 232, 235
 Index of river connectivity (ICF), 102, 116
 Index of specific pollution sensitivity (IPS), 91
 Indicator organisms/taxa, 37, 53, 70, 213, 311
 analysis/IndVal, 90, 96, 188
 Indicator values, 69
 Indices, 65
 Industrial compounds, 25, 283, 286, 311
 Insects, 171, 174
 Integrated biopollution risk index (IBPR), 39, 43
 Intercalibration, 65
 Intercalibration Common Metric (ICM), 65, 74
 Invasive species, 201
 Isotope dilution mass spectrometry (IDMS), 276

K

Ketoprofen, 293

L

La Baells reservoir, 211
 Lakes, 1, 6, 9, 12, 18, 65, 171, 184, 204, 213
 shallow, 171
 Land use analysis, 237
Liza ramada, 106, 117, 134
 Llobregat, 68, 77, 109, 241, 249, 263, 285, 297, 311
 Low quantification limits (LOQs), 269, 270
Luciobarbus graellsii, 45, 106, 117, 133, 254

M

M-AMBI, 152, 159
 MAC-EQS, 270
 Macroinvertebrate quality index (MEDOCC), 19
 Macroinvertebrates, 3, 41, 57, 67, 90, 136, 149, 176, 192, 223, 253
 Macrophytes, 3, 81, 94, 173, 191, 222, 250
 Maximum ecological potential (MEP), 202
 Mediterranean basins, 1, 26, 105, 109
 Mediterranean Geographical Intercalibration Group (Med-GIG), 6
 Mediterranean rivers of variable flow, 76
 Mequinenza reservoir, 153
 Mercury, 12, 15, 17, 254, 259, 262
 Metallothioneins, 254, 260

- Metrics, 12
 Microarray analysis, 260
Microcystis sp., 210
 Micropollutants, 283, 286, 295
 risk assessment, 313
 Molinate, 258
 Monitoring networks, 1, 3, 7, 239
 Monitoring programs, 1, 37, 40, 88, 90, 101,
 216, 221, 231, 243, 257
Mugil cephalus, 106, 117, 134
 Multichemical risk assessment, 299
 Multimetric indexes (MMIs), 81, 94, 96
Myriophyllum spicatum, 92
- N**
- Naphthalene, 276
 Natural attenuation, 296
 Natural background levels (NBLs), 15
Navicula cryptotenella, 67, 156
Navicula gregaria, 74, 156
 Nitrate, 6, 9–11, 20, 164, 176
Nitzschia fonticola, 67
Nitzschia inconspicua, 74, 156
 Nonylphenol, 15, 253, 273, 286, 288, 293, 295,
 297, 310–312
 Nonylphenol ethoxylates (NPEO), 295
 Nonylphenol monocarboxylate (NP1EC), 286,
 288
- O**
- Octylphenol, 15, 273, 286, 288, 293, 311,
 312
 Omics, 249, 260
 Organochlorine residues, 254
 Oxygen, 207, 214, 250
 dissolved, 72, 135, 154, 204, 211
 singlet, 297
- P**
- Paracetamol, 296
 Partial canonical correspondence analysis
 (PCCA), 176
 Passive induction transmitters (PIT tags), 115
 Pearson correlation, 229
Pellia endiviifolia, 91
 Perchloroethylene (PCE), 20
 Perfluorinated compounds (PFCs), 279, 296
 Perfluoroalkyl substances (PFAS), 286
 Perfluorooctane carboxylic acid (PFOA), 291,
 293
- Perfluorooctane sulfonate (PFOS), 293
 Peroxy radicals, 297
 Personal care products, 286, 293
 Pesticides, 7, 11, 25, 249–263, 286, 293
Petromizon marinus, 114
 Phosphates, 69, 91–93, 153, 164, 286
 Photolysis, 26, 297
Phoxinus bigerri, 106, 110, 113, 118, 133
Phoxinus phoxinus, 40
Phragmites, 87
Physella acuta, 257
 Polybrominated diphenyl ethers (PBDE), 273,
 276, 278
 Polychlorobiphenyls, 254
 Polycyclic aromatic hydrocarbons (PAHs),
 254, 274, 278
Posidonia oceanica, 12
Potamogeton pectinatus (*Stuckenia pectinata*)
 92
 Precautionary principle, 25
 Principal component analysis (PCA), 204
 Prioritization, 24, 283, 300
 Priority substances/pollutants, 269, 284, 286
 Propanil, 258
Psilunio littoralis, 254
- Q**
- QAELS, 13, 171, 173, 193
 Qualitat del Bosc de Ribera (riparian forest
 quality index, QBR), 81, 89
 Quinoxifen, 279
- R**
- Ranking index, 300, 311
 Registration, evaluation, authorization and
 restriction of chemicals (REACH), 284
 Reactive oxygen species (ROS), 253
 Reference conditions, 70, 83, 173
 Reservoir Fish Assemblage Index (RFAI), 108
 Reservoirs, 1, 17, 153, 201, 216, 226, 235
 typology, 204
Rhoicosphenia abbreviata, 67
 Riba-Roja reservoir, 153, 205
 Riparian forest evaluation index (RFV), 228
 Riparian quality index (RQI/QBR), 89, 95,
 224, 228, 239
 Risk, 298
 assessment, 283, 299
 Riudecanyes reservoir, 205
 River connectivity index (ICF), 235
 River habitat index (IHF), 224, 228

Rivers, 15, 81, 125
 basin management plan, 221
 connectivity, 101
 obstacles, 113
 types, 70
 variable flow, 76
 Rott's trophic index, 75
Rutilus rutilus, 45, 46, 107, 110, 134

S
 Sacramento Soil Moisture Accounting (SAC-SMA) model, 114
Salmo trutta, 40, 45, 106, 108, 113, 134
 Salt-wedge estuary, 149
 Sampling, procedures/protocols, 5, 12, 174, 273
 sites, 12, 68, 229
 Santa Fe reservoir, 204
 Sau reservoir, 205, 211
 Scaled indicator value (SIV), 188
 Secchi disk depth, 207
 Sediments, 26, 113, 152, 209, 215, 295
 marine, 19
 quality, 90
 Sensitivity, 69, 91, 94, 155, 171, 175, 188, 273
 Sewage, 283
 effluents, 151, 153, 254
 sludge, 295
 treatment plants, 258, 263
 urban, 153
 Zaragoza, 254
 Shallow lakes, 171
 Short-chain chlorinated paraffins (SCCPs), 278
 Site-specific biological contamination index (SBC), 39, 41
 Siurana reservoir, 205
 Spearman correlation (Spearman's rho), 50, 52, 60, 72, 111, 157–162, 180, 185, 229, 262
Squalius laietanus, 106, 110, 112, 118, 134
 State indicators, 50
 Stressor indicators, 50
Stuckenia pectinata, 92
 Sulphate, 20
 Susqueda reservoir, 205
 Systeme d'Evaluation de la Qualité du Milieu Physique (SEQ-MP), 224
 Système Relationnel d'Audit de l'Hydromorphologie des Cours d'Eau (SYRAH), 224

T

Tandem mass spectrometry (MS/MS), 275
 Taxonomic resolution, 180
 Temporary ecosystems, 22
 Ter River, 205, 210
 Terbutryn, 279
 Testosterone, 253
 Threshold values (TVs), 15, 22, 205
 Tordera River, 104
 Toxic units (TU), 25, 258, 298–300
 Transformation products (TPs), 283, 297
 Transitional waters, 18, 171
 Trichloroethylene (TCE), 20
 TRIX index, 177, 181
 Trophic diatom indices (TDI/TID), 165
 Trophic state index (TSI), 207, 213
Typha, 87, 88

U

Urban sewage, 153
 US Environmental Protection Agency (US-EPA), 88
 US National Wetland Condition Assessment (US-NWCA), 88

V

Valsartan, 293
 Vitellogenin (VTG), 253

W

Wastewater treatment plants (WWTP), 26, 249, 286, 295, 314
 Water Framework Directive (WFD), 1, 101, 125, 201, 249
 comparison, 81
 Water quality, reservoirs, 215
 thresholds, 181
 Water quality index (WQI), 207
 Water withdrawal degree analysis (WW), 233
 Wetlands, 1, 12, 81, 171
 thalassohaline, 173–194

Z

Zaragoza, sewage treatment plant (STP), 254