

Index

A

Abiotic factors, 168
Abyssal plain, 10
Accretion, 120
Acid sulphate soils, 65
Afforestation, 151, 152
Aggressive man eater, 194
Algal matting, 123
Algal blooms, 57
Algal matting, 36
Alkalinity, 55
Alluvial plain, 10, 14
Amalda ampla, 129
American Society for Testing and Materials (ASTM), 104
Anthropogenic interferences, 58
Anthropological interferences, 177, 201
Aqua-agri-silvi-culture, 174
Aquaculture, 173
Aqueous ripples, 91
Arcuate streaks, 94
Arithmetic probability papers, 104, 105
Artificial regeneration, 151
ASTM. *See* American Society for Testing and Materials (ASTM)
Asymmetric geometry, 13
Available nitrogen, 179
Available phosphorus, 179
Available potash, 180

B

Backwash flows, 127
Backwash ripple marks, 90
Bacteria, 169

Bakkhali beach, 78
Bangaduni River, 30
Bank deposits, 123
Bank erosion, 188
Bay of Bengal, 5, 9
Beach cusps, 92
Beach environment, 86
Beach erosion, 133
Beach-face, 77
Beach forest, 144
Bed forms, 80, 90
Bengal Basin, 11, 13
Bengal deep sea, 78
Bengal delta, 14
Benthic feeder, 135
Bidya, 29
Bidyadhari river, 27, 188
Bioaccumulation, 191
Bio-availability, 73
Bioclimatology, 141
Bio-degradable fertilizer, 190
Bio-degradation, 48
Biogenic components, 40, 179
Biogenous coast, 10, 85, 129
Biological factors, 85
Biological indicator, 131–133
Biological magnification, 190
Biological processes, 167
Biological tools, 134
Biomagnifications, 191
Biomass, 143, 200
Biosphere Reserve, 140
Biospheres, 203
Biota, 129
Biotic community, 183, 202

Biotic factors, 168
 Bioturbation structures, 129
 Bioturbation zones, 11
 Bottom topography, 202
 Boulders, 126
 Brackish water, 47–58
 Buffer system, 56
 Buffer zone, 6

C

Calcium carbonate, 71
 Capillary waves, 95
 Capped-off ripples, 95
 Carbon dioxide, 56
 Carnivores, 163
 Channel regime, 81
 Chemical oxygen demand (COD), 57
 Chuksar Island, 89
 Ciliates flagellates, 169
 Circumstantial man eaters, 194
 Clay minerals, 179
 Clay particles, 55
 Clay size, 103
 Coastal changes, 86
 Coastal dunes, 81
 Coastal ecosystem, 202
 Coastal erosion, 86
 Coastal fisheries, 179
 Coastal morphodynamics, 77
 Coastal processes, 9, 83
 Coastal Sunderbans, 80, 81, 87, 98, 99
 Coastal wetlands, 9
 Coastal woodlands, 153
 Coastline, 23
 Collapsing of banks, 123
 Colour variation, 36
 Continental drift, 13
 Core zone, 5–6
 Corrosion, 127
 Crab burrows, 123
 Creepers, 82
 Crescentic bars, 38
 Crescentic point bars, 33, 142
 Cross bedding, 80
 Crustaceans, 161
 Crypto viviparus seeds, 140
 Cumulative curves, 104, 106
 Curly mud cracks, 122
 Current ripples, 93
 Cyclones, 6

D

Dampier and Hodges line, 5
 Dampier–Hodges imaginary boundary line, 24
 Decomposition, 161, 164
 Deforestation, 155
 Degradation, 167
 Degraded alkali soils, 65
 Delta plain, 14
 Delta progradation, 14, 78
 Desiccation cracks, 36
 Designed man eaters, 194
 Detritus, 161, 179
 Diffusion, 69
 Dissolved organic matter, 169
 Dissolved oxygen, 56
 Dissolved oxygen, 51, 132
 Diurnal inequality, 6
 Domestic sewage, 56
 Double crested ripples, 94

E

Ebb-and flood-tidal currents, 32
 Ebb channel, 84
 Ebb-flood cycles, 115
 Ebb flow, 39
 Ebb-tidal currents, 32
 Ecological balance, 202
 Electrical conductivity (EC), 63
 Electrical resistance, 63
 Electrical resistivity, 63
 Embankments, 41, 201
 Encountered species, 183
 Energy flows, 170
 Environmental heterogeneity, 202
 Epiphytic algae, 202
 Epsilon cross stratification, 36
 Erosion, 119
 Erosional features, 200
 Erosional sedimentary structures, 99
 Erosional structures, 128
 ESP. *See* Exchangeable sodium percentage (ESP)
 Estuarine delta, 8
 Estuarine delta coast, 16
 Estuarine islands, 17
 Estuarine sediments, 105
 Estuary, 23
 Eutrophication, 51
 Exchangeable, 71
 Exchangeable sodium percentage (ESP), 63

F

Finfish, 161, 183
 Fish drying operations, 201
 Flood-ebb cycles, 120
 Flood plains, 146
 Flood tidal currents, 32
 Flood-tidal delta, 32
 Flora, 149
 Floral dynamics, 143
 Flow velocity, 24
 Fluvio-marine deposits, 3
 Folding, 131
 Food chain, 164
 Food web, 164
 Foraminifera, 86
 Foraminiferal assemblage, 86
 Foraminiferal biofacies, 86
 Foreshore zone, 93
 Fragile ecology, 42
 Fresh water discharges, 5, 23, 54
 Fungal degradation, 169
 Fungi, 169
 Funnel shaped estuaries, 120
 Furrow and ridge structures, 126, 136, 201

G

Ganga alluvium, 62
 Ganga–Brahmaputra delta front, 8
 Ganga–Brahmaputra deltaic plain, 1
 Ganga–Brahmaputra–Meghna (GBM), 43
 Gangasagar beach, 89, 98
 Gastropod, 84
 GBM. *See* Ganga–Brahmaputra–Meghna (GBM)
 Geomorphic mapping, 177
 Geomorphic sand bodies, 33
 Global warming, 202
 Gobadia River, 32
 Grain size analysis, 103
 Grain size distribution, 104
 Grazing traces, 129
 Green wall, 146
 Guasuba River, 30

H

Hatania–Doania creek, 32
 Hatching, 183
 Head-water discharge, 81
 Heavy mineral, 85
 Helicoidal flow pattern, 119, 120

Herbivores, 163
 Hinge zone, 11
 Hinterlands, 42, 44
 Hooghly–Matla estuary, 81
 Horizontal laminae, 44
 Hugli–Matla estuary, 15
 Human habitation zones, 195
 Hydrology, 143
 Hyper-salinity, 48, 74

I

Industrial effluents, 188
 Inflection points, 106
 Ingression of salinity, 202
 Interference ripple marks, 92, 93
 Internal laminations, 131
 Intertidal zones, 10, 39

J

Jambu Island, 39
 Jarosite, 66

K

Kurtosis, 104

L

‘Ladder-‘back’ ripple marks, 94
 Lateral progradation, 78
 Lateral sedimentation, 44
 Leaching, 167
 Lee, 92
 Leptokurtic, 109
 Lingoid mega ripples, 92
 Lingoid ripples, 92
 Lithogenic components, 179
 Litter fall, 164
 Littoral drift, 129
 Local sagging, 123
 Log-normal population, 105
 Log-probability curves, 105
 Log-probability plots, 105
 Longitudinal bars, 16
 Longitudinal cross-bedding, 37
 Long shore bars, 97
 Lower Bengal Basin, 3
 Lower delta plain, 15
 Lower long sand, 90, 98
 Low land flood plain, 14
 Lunate mega ripples, 94

M

Macro-consumers, 164
 Macro-heterotrophs, 169
 Macrotidal, 6, 36
 Mangals, 141, 160
 Mangroves, 54, 58, 139, 141
 ecosystem, 163, 173
 litters, 164
 nursery, 152
 plantation, 153
 regeneration, 151
 of second generation, 146
 swamps, 140, 149, 182
 vegetation, 139, 141, 143, 148, 151
 zonations, 74, 144
 Marginal islands, 140
 Marginal levees, 33
 Marsh sediments, 150
 Marsh vegetation, 149
 Mastication enhancement, 169
 Matla, 29
 Mean size, 104
 Mechanical fragmentation, 86, 167
 Megaripples, 92
 Meiofauna, 164
 Meso-macrotidal amplitude, 48
 Meso-macrotidal coastline, 16
 Meso-macro tidal realm, 131
 Mesotidal, 36
 Metal binding capacity, 73
 Metal content, 72
 Metal oxides, 72, 131
 Micaceous minerals, 70
 Microbes, 169
 Microbial community, 169
 Microbial immobilization, 166
 Microcline, 70
 Microdelta fronts, 41
 Microfaulting, 131
 Micro-morphological features,
 85, 129
 Micronutrients, 69, 71
 Microorganisms, 172, 191
 Microtidal, 36
 Mid-channels bars, 33, 37
 Moist tropical forest, 144
 Molluscan shells, 78, 87, 127
 Mollusks, 161
 Molting, 182
 Monsoon, 6
 Morphodynamic processes, 99
 Morphotypes, 15
 Mortality, 185, 186

Mortality rate, 153
 Mouth shoals, 38
 Mridangabhangha River, 31
 Mud balls, 87, 127, 136
 Mud banks, 41
 Mud chunks, 41
 Mud cracks, 122
 Mud drapes, 85
 Muddy slur, 126
 Mud mounds, 127, 136, 201
 Mud pellets, 41
 Mud ridges, 126
 Multi-generation deltas, 9

N

Natural creek, 39
 Natural hazards, 178
 Natural levees, 35, 146, 151
 Natural phenomenon, 199
 Neap-spring cycles, 120
 Negative skewness, 115
 Nematodes, 169
 Neo-tectonism, 131
 Nitrification, 74
 Nitrogen fixation, 74
 Nitrogen uptake, 74
 Non-biodegradable trashes, 88, 196
 Non-linear pattern, 106, 116
 Non-overlapping character, 143, 146
 Non-saline alkali, 65
 Non-saline soil, 63
 NPK values, 148
 Nutrient availability, 200
 Nutrient concentration, 179
 Nutrient exports, 170
 Nutrient input, 170
 Nutrient recycling, 177, 187

O

Obstacle scours, 128
 Oil & grease, 191
 Organic carbon, 68, 150
 Organic detritus, 169
 Organic matter, 40, 191
 Orthoclase, 70
 Oscillatory flow, 19, 99
 Osmotic potential, 61, 74
 Osmotic pressure, 54
 Outer bar (ebb-tidal delta), 33
 Outfall channel, 190
 Oyster shells, 126

P

Palaeochannels, 9
 Palaeoshorelines, 9
 Paleo-shoreline, 79
 Particle size, 103
 Particulate organic matter, 167
 Pelecypod, 84
 Penaeid larvae, 180
 Penaeid prawns, 179
 Permissible limit, 191
 pH, 48
 Phosphorus, 71
 Physical processes, 167
 Physico-chemical reactions, 48
 Phytoplankton, 51, 162
 Piecemeal mechanism, 124, 125
 Piyali River, 29
 Planktonic foraminifera, 86
 Planktonic larvae, 183
 Plio-Pleistocene, 9
 Pneumatophores, 140, 160
 Point-bars, 37
 Pollination, 174
 Pollutants, 188
 Polychaetes, 161
 Polygonal ripple, 93
 Polypropylene, 42, 201
 Population density, 86, 135
 Post larvae, 183
 Post monsoon, 6
 Prawn seeds, 177
 Pre-monsoon, 6
 Primary detritus, 164
 Primary production, 164
 Producers, 162
 Productivity, 173
 Propagules, 153
 Pyrites, 66

Q

Quaternary, 3

R

Random exploitation, 185
 Red crab, 133
 Regeneration, 151
 of nutrients, 169
 Reworking of sediments, 169
 Rhomboid marks, 91
 Rhomboid rill marks, 91

Rhythmic inundation, 54
 Rhythmic laminations, 39
 Ripple crests, 95
 Ripple marks, 92
 Ripple-rill complex, 95
 River basin, 42
 Riverbed, 43
 sedimentation, 155
 River load, 43
 River mouth, 2, 33
 River mouth bars, 38, 120
 River mouth island, 17
 Rolling, 111, 116
 Root buttress, 160
 Runnels, 92

S

Sagar Island, 89, 97
 Saline alkali soils, 64
 Saline influence, 8
 Saline intrusion, 43
 Saline turf soil, 63
 Salinity, 51, 132
 Salinity level, 54
 Salt affected soils, 71
 Saltation population, 108, 116
 Salt balance mechanism, 140
 Salt encrustations, 10, 120
 Salt-encrusted, 36
 Salt exclusion, 140
 Salt excretion, 140
 Salt gland, 160
 Salt marshes, 139, 149, 182
 Salt tolerant forests, 153
 Salt-water menace, 145
 Sand body geometry, 39
 Sand dunes, 83
 Sand laminae, 36
 Sand size, 103
 Sapling, 188
 Saptamukhi river, 32
 Saptamukhi estuary, 32
 Sesquioxides, 64, 65
 Sea grasses, 162, 170
 Sea level rise, 199
 Sea wall, 200
 Secchi disc, 55
 Sedimentary structures, 80
 Sediment grain size, 105
 Sediment movement, 81
 Semi-diurnal, 6

Sequential growth, 146
 Sewage discharges, 58
 Shellfish, 161, 183
 Shrubs, 82
 Sieve analysis, 104
 Sieving-cum-pipetting method, 104
 Siliciclastic beach, 16
 Silting process, 189
 Silt size, 103
 Sinuous flow pattern, 120
 Sinuous tidal flows, 24
 Size frequency distribution, 103
 Skewness, 104
 Sodium-potassium exchange, 70
 Soil chunks, 124
 Soil nutrients, 69
 Soil salinity, 65
 Spawning, 183
 Species composition, 143
 Species diversity, 86, 143
 Stage I mangroves, 146
 Stage III mangroves, 146
 Standard deviation, 104
 Statistical size parameters, 104
 Stilt roots, 140
 Stoss, 92
 Straight crested ripples, 95
 Stratigraphic breaks, 11
 Stratigraphic sections, 11
 Structural diversity, 172
 Sub-aqueous delta, 78
 Sub-marine canyon, 78
 Subpopulations, 111
 Subsidence, 15, 123
 Substrate soils, 61-75
 Succession, 143
 Sunderbans, 1, 203
 Sunderbans delta complex, 9
 Sunderbans islands, 17
 Sunderbans National Park, 6
 Supratidal sands, 39
 Supratidal zones, 10, 39
 Suspended particles, 10
 Suspension, 111, 116
 Suspensional depositions, 39
 Suspension transport, 99
 Swash backwash processes, 92
 Swash marks, 38, 91
 Swash platform, 38
 Swatch of No Ground, 10
 Symmetrical flow, 19, 99

T

Tadpole nests, 94
 Tectonic evolution, 11
 Tectonic (neotectonic) movements, 129
 Terrigenous sediments, 13, 14
 Texture, 104
 Thakuran River, 30
 Tidal amplitudes, 6, 8, 54, 120
 Tidal bores, 129
 Tidal creeks, 39, 44
 Tidal cycles, 10
 Tidal flat, 128
 Tidal fluctuations, 124, 143
 Tidal forests, 9, 144, 153
 Tidal height, 81
 Tidal lamination, 85
 Tidal length, 8
 Tidal marshes, 10
 Tidal regime, 120
 Tidal rivers, 23
 Tidal shoals, 110
 Tidal surge, 84, 128
 Tidal tropical forest, 141
 Tide, 8
 Tiger straying, 195
 Total dissolved solids (TDS), 57
 Total organic matter, 68, 150
 Toxic concentration, 143
 Trace metals, 68, 72
 Tractive movements, 112
 Trampling, 197
 Transitional zone, 6
 Transverse mud bars, 126
 Trashes, 196, 197
 Tropical cyclones, 7, 9
 Turbidity, 55

U

Undercutting, 124, 188
 Undulatory ripples, 92
 Upper delta plain, 15

V

Vegetation carpet, 150
 Vegetation dynamics, 143
 Vegetation succession, 146
 Viviparous germination, 160

W

- Water quality, 58, 188
- Water salinity, 51
- Water temperature, 6, 49
- Wave heights, 8
- Wave ripples, 93
- Wind velocity, 6

Wood seams, 146

Wood trunks, 41

Z

Zingg's shape class, 41

Zooplankton, 51