

Appendix 1 – Working Draft Global Ecosystems Classification Framework

Level	Theme	Terrestrial	Freshwater	Nearshore	Neritic	Oceanic
1	Domain separator	Elevation > 0	Elevation > 0	Bathymetry 0 – 30m	Bathymetry 30 – 200m	Bathymetry > 200m
2a	Macro-bioclimate	Global climate regions (partitioning of Polar, Boreal, Temperate, Mediterranean, Tropical)	Global climate regions (partitioning of Polar, Boreal, Temperate, Mediterranean, Tropical)	Global coastal/shelf climate regions (partitioning of Polar, Temperate, Tropical)	Global coastal/shelf climate regions (partitioning of Polar, Temperate, Tropical)	Global pelagic climate regions (partitioning of Polar, Temperate, Tropical)
2b	Macro-biogeographic region	Global terrestrial biogeographic realms (8: Neotropical, Nearctic, Palearctic, Afrotropical, Indomalayan, Australasian, Oceania, Antarctica)	Global terrestrial biogeographic realms (8: Neotropical, Nearctic, Palearctic, Afrotropical, Indomalayan, Australasian, Oceania, Antarctica)	Global marine biogeographic realms (12) for coastal/shelf regions: (Arctic, Northern Atlantic, Northern Pacific, Tropical Atlantic, Western Indopacific, Central Indopacific, Tropical Pacific Plate, Tropical Eastern Pacific, Temperate South America, Temperate South Africa, Temperate Australasia, Southern Ocean)	Global marine biogeographic realms (12) for coastal/shelf regions: (Arctic, Northern Atlantic, Northern Pacific, Tropical Atlantic, Western Indopacific, Central Indopacific, Tropical Pacific Plate, Tropical Eastern Pacific, Temperate South America, Temperate South Africa, Temperate Australasia, Southern Ocean)	Global marine biogeographic realms (9) for pelagic regions: (Antarctic Polar, Antarctic Westerly Winds, Atlantic Polar, Atlantic Trade Winds, Atlantic Westerly Winds, Indian Ocean Trade Winds, Pacific Polar, Pacific Trade Winds, Pacific Westerly Winds)
3a	Meso-bioclimate	Regional land climate regions determined by climate data (biomes or plant functional types)	Regional land climate regions determined by climate data (biomes or plant functional types)	Regional land/sea climate regions determined by climate data (biomes or plant functional types) (Longhurst? LMEs?)	Regional marine climate regions defined by sea surface temperature, sea surface elevation, mixed layer depth, salinity (Longhurst? LMEs?)	Regional marine climate regions defined by sea surface temperature, sea surface elevation, mixed layer depth, salinity (?)
3b	Meso-biogeographic region	WWF/TNC Terrestrial Ecoregions (or phytogeographic (e.g Takhtajan) derivatives thereof)	WWF/TNC Freshwater Ecoregions (or zoogeographic (e.g. Maxwell) derivatives thereof)	WWF/TNC Marine Ecoregions (or biogeographic derivatives (e.g. Longhurst) thereof)	WWF Marine Ecoregions (or biogeographic derivatives (e.g. Longhurst) thereof)	WWF Marine Ecoregions (or biogeographic derivatives (e.g. Longhurst) thereof)
4	Primary micro-scale environmental determinant	Geomorphology/ Geochemistry from: landforms, and specialized	Surface Water Characteristics from: Nested size catchments (headwater, medium , large, interacting rivers and	Geoforms, Hydroforms (e.g. hydrochemical phenomena, seafloor landforms and substrate	Geoforms, Hydroforms (e.g. hydrochemical phenomena, seafloor landforms and substrate	Geoforms, Hydroforms (e.g. hydrochemistry of water column)

		substrates	(lakes,) elevation gradient (and catchment morphology), connectivity (rivers, lakes, wetlands, glaciers)	types)	types)	
5	Secondary micro-scale environmental determinant	Moisture Index from: topographic index of plant-available soil moisture, substrate porosity, and solar radiation index	Energy/Productivity Input (external or internal); Flow characteristics from: chemistry, porosity, temperature (e.g. ground water/surface water, stable, flashy, alkaline, neutral, acidic, black/white, temperature	Salinity, Temperature	Salinity, Temperature	Salinity, Temperature
6	Biotic structure	Total biomass, vegetation structure/ land cover, landscape juxtaposition Gradient from secondary vegetation to primary vegetation/undisturbed land cover	Functional biotic assemblages, guilds	Coastal macrohabitats	Continental shelf macrohabitats	Biomass estimate by water column layer
7	Biotic composition	Species composition, dominance and co-dominance	Genera and species composition	Genera and species composition	Genera and species composition	Plankton communities, Genera and species composition