

Table 3. Examples of Ecosystem Services Derived from Ecosystem Functions (Adapted from Costanza et al 1998).

Ecosystem Service	Ecosystem Function	Examples
Gas Regulation	Regulation of atmospheric chemical composition	CO ² /O ₂ balance, O ³ for UVB protection and SO _x levels
Climate Regulation	Regulation of global temperature, precipitation etc	DMS production affecting cloud formation
Disturbance Regulation	Capacity, dampening and integrity of ecosystem response to environmental fluctuations	Storm protection, flood control, drought recovery and other aspects of habitat response to environmental variability mainly controlled by vegetation
Water Regulation	Regulation of hydrological flows	Provision of water for agricultural (such as irrigation) or industrial (such as mining) processes or transportation
Water Supply	Storage and retention of water	Provision of water by catchments, reservoirs and aquifers
Erosion Control and Sediment Retention	Retention of soil within an ecosystem	Prevention of soil loss by wind, runoff, or other removal processes, storage of silt in lakes and wetlands
Soil Formation	Soil formation processes	Weathering of rock and the accumulation of organic material
Nutrient Cycling	Storage, internal cycling, processing and acquisition of nutrients	Nitrogen fixation and N, P and other nutrient cycles
Waste Treatment	Recovery of mobile nutrients and removal or breakdown of excess or toxic nutrients or compounds	Waste treatment, pollution control, detoxification
Pollination	Movement of floral gametes	Provision of pollinators for the reproduction of plant populations
Natural Pest Control	Tritrophic-dynamic regulation of populations	Predator-prey interactions such as reduction of herbivory by predators
Refugia	Habitat for resident and transient	Nurseries, habitat for migratory species, Regional habitats for locally harvested species or overwintering grounds
Food production	That proportion of gross primary production extractable as food	Production of fish, game, crops, nuts, fruits etc
Raw Materials	That proportion of gross primary production extractable as raw materials	The production of lumber, fuel or fodder
Genetic Resources	Sources of unique biological materials and products	Medicine, products for materials science, genes for resistance to plant pathogens and crop pests
Recreation	Providing opportunities for recreational activities	Eco-tourism, sport fishing, hiking etc
Cultural	Providing opportunities for non-commercial uses	Aesthetic, artistic, educational, spiritual and scientific values of ecosystems