



Department of Civil and Environmental Engineering  
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## Aquatic Environmental Science 12. Carbon Dynamics & Ecosystem

1. Carbon Dynamics
    - Organic matter in aquatic ecosystems
    - Major carbon cycle in aquatic ecosystems
    - Carbon dynamics in lakes and streams
    - River Continuum Concept
    - Dissolved organic carbon
  2. Fundamentals of Ecology
    - Ecosystem as system
    - Taxonomy and species
    - DNA in recent ecological studies
    - Ecological niche
    - Habitat suitability and species distribution models
  3. Biodiversity
    - Group of organisms
    - Three levels of biodiversity
    - Biodiversity and ecosystem service
    - Species richness
    - Spatial evaluation of biodiversity
    - Disturbance and aquatic communities
  4. Exercise
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