

AIM: What are the basic types of aquatic life zones and the factors influencing life there?

1. Aquatic Life Zones – determined by salinity (dissolved salts)

a. freshwater (salinity is less than 0.5ppt or .05%)

lakes, ponds, rivers, inland wetlands

b. saltwater/marine (salinity ~ 35ppt or 3.5%)

estuaries, coastal marshes and swamps,
coral reefs, deep ocean

2. Main Types of Life

a. **plankton**

not independently mobile (drift with currents)

phytoplankton – producers (algae)

zooplankton – heterotrophic (krill, jellyfish)

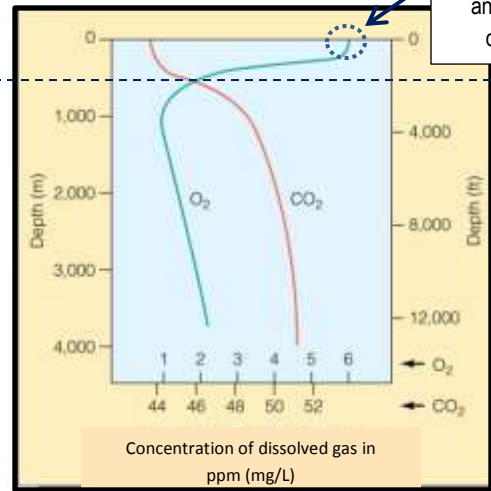
b. **nekton** actively swimming organisms (sharks, dolphins, tuna)

c. **benthos** “bottom dwellers” (coral, clams, crabs, lobsters)

3. Factors Limiting Life

- a. temperature
- b. availability of sunlight
- c. DO (5-9ppm optimal)
- d. other nutrients (dissolved CO₂, nitrates, phosphates)

approximate limit of sunlight penetration



high O₂ levels because of photosynthesis and surface diffusion