Terms of Importance

1. Salinity
2. Photic
3. Aphotic
4. Wetland
5. Watershed
6. Estuaries
7. Brackish
Aquatic Ecosystems

- **Salinity**: the amount of dissolved salt present in water. Systems are classified as salt water, fresh water, or brackish.

- Photosynthesis tends to be limited by light availability, which is a function of depth and water clarity.

- Aquatic ecosystems are either flowing or standing.
Aquatic ecosystem zones: photic and aphotic,

- **Photic**: depth of water where enough sunlight is received for photosynthesis to occur.
  - 90% of marine life lives in the photic zone.
- **Aphotic**: water that is so deep, it does not receive enough sunlight for photosynthesis to occur.
Freshwater Ecosystems: Ponds, Lakes, Inland Seas

- Salinity is less than 0.5 ppt (parts per thousand)
- Ponds and lakes are divided horizontally into zones: littoral (shore) and limnetic (open water)
Watershed: The area of land drained by a river and its tributaries
Freshwater Ecosystems: Wetlands

• Areas of land flooded with water at least part of the year
• Include freshwater marshes, swamps, bogs, and fens
• Wetlands prevent flooding, recharge aquifers, filter pollutants, and provide habitats.
Estuaries

- Occur where a river flows into the ocean or an inland sea
- **Brackish** ecosystems; organisms must tolerate wide salinity and temperature ranges.
- Like wetlands, estuaries help prevent flooding and soil erosion as well as provide habitats.
Diagram of a Typical Estuary

Salinity Range:

- Freshwater: 0 ppt
- Brackish: 20 - 31 ppt
- Marine: 30-35 ppt

Eelgrass optimum

Diagram showing the transition from freshwater to marine with a focus on the salinity range and the distribution of eelgrass.
Ocean Ecosystems

- **Intertidal**: seashore, highly diverse; extreme range of temperature, moisture, and salinity

- **Pelagic zone or Open ocean**: Low productivity due to low amounts of light. Includes; phytoplankton, deep sea organisms and hydrothermal vents.
Question

Life underwater is greatly affected by light availability, which is directly related to

a. water quality.          c. salinity.
b. water depth.           d. temperature.
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