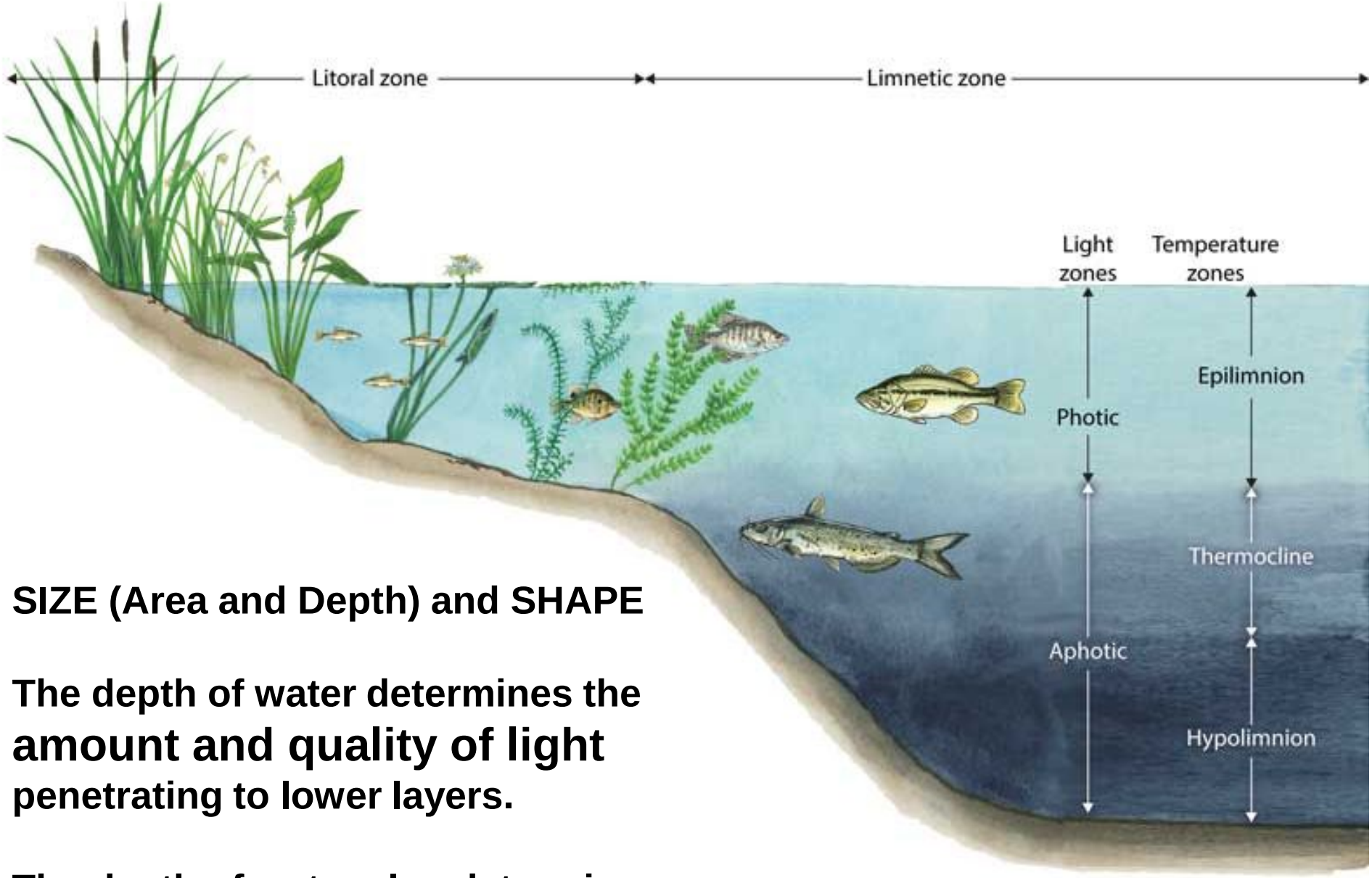
# Ecosystem Approach in Pond / Lake Conservation

**Brij Gopal**
*Centre for Inland Waters in South Asia, Jaipur*




**SIZE (Area and Depth) and SHAPE**

**The depth of water determines the amount and quality of light penetrating to lower layers.**

**The depth of water also determines some attributes of temperature**

# Lake Components

## Water and Soil
## Nutrients (from outside or soil)

## Phytoplankton and/or Aquatic Plants

## Zooplankton

## Fish

## Birds

## Amphibia

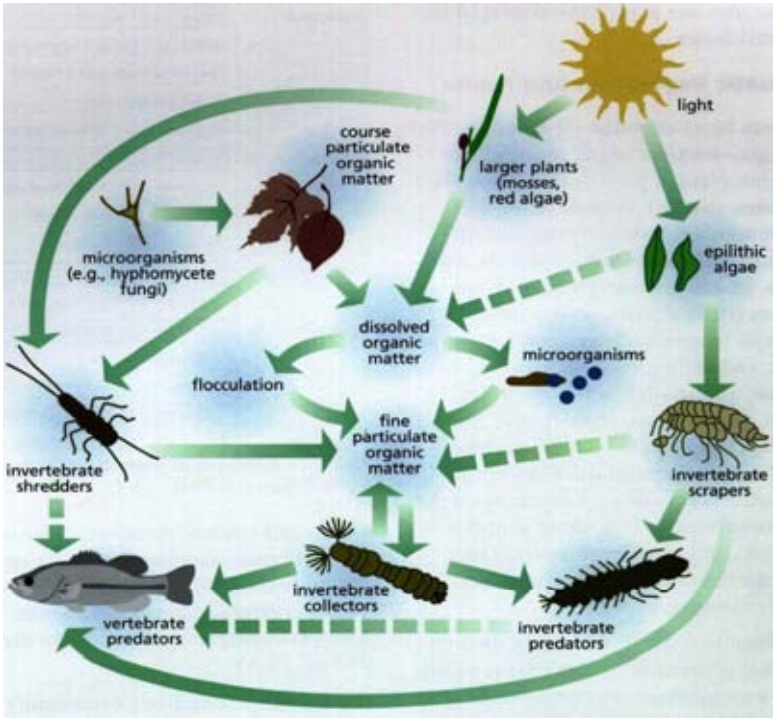
# Ecosystem Processes

**Energy flow**
**Primary and Secondary production**

**Biogeochemical Cycling**

**Sediment-Water interaction**

**Atmosphere-water interaction**




# Catchment Interactions

**Every Lake/Pond depends upon its catchment**

# Ecosystem Services

## Provisioning

## Regulating

## Supporting

## Cultural & Aesthetic

# MANAGEMENT

## Objective: for Which Ecosystem Service(s)

**Drinking Water**

high quality – low nutrients

**Recreation/Aesthetics**

no pollution – garbage- weeds – algal blooms

**Fisheries**

organic feeds – more nutrients –algae- plants

**Agriculture**

high water storage potential (low evaporation) -

No groundwater recharge

**Microclimate regulation**

larger water surface – volume


Thank You All