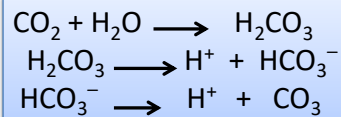


Ecology of Teleost Fishes Carbon dioxide (C

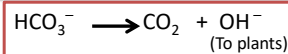
- CO₂ is another water quality variable of considerable importance
- Photosynthesis activity by aquatic plants is the major cause for CO₂ drain.
- Industrial pollution may also lead to lowering of pH and oxygen, increase in CO₂ and formation of black sulphide muds (**Doudroff and Katz, 1951**)

Less than 1% of CO₂ in water forms carbonate acid, which dissociates into bicarbonate and carbonate ions as follows:



An equilibrium is maintained between reactants and products in water

Removal of CO₂ during photosynthesis in the presence of sunlight causes an increase in pH due to increases hydroxyl ion concentration



- Increased hydrogen ion concentration result in drop of pH .
- Diurnal pH change in fishponds, of the order of 1 pH unit, is chiefly due to biological process.
- The minimum threshold oxygen requirements of fish increase with an increase in CO₂ levels.
- Fishes are also able to detect and respond to CO₂ gradients and many of the, avoid free CO₂ levels as low as 1.6 mg/l (**Robert, R.J.,1978**)