

# Regenerating eutrophic aquatic ecosystem through hydrophytes

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**ABSTRACT :** As the world facing the problem of eutrophication and it is decreasing the life of lakes, this will produce the shortage of freshwater. Hydrophytes are one of the cheaper and best options for regenerating eutrophic lake. Model eutrophic aquatic ecosystems was designed for bioremediation purpose, for use of hydrophytes, a freshwater static model ecosystem was established. Glass aquarium measuring 180 x 45x 45 cm was used as an ecosystem chamber. Fifteen kg of black soil from Wadali Lake was added to make a 4 cm bed in the aquarium. Different hydrophytic plants like *Ecchornia*, *Pistia*, *Chara*, *Vallisneria*, *Hydrilla*, *Naja* were introduced in the aquarium. Then it was filled with 200 L of water. Afterwards certain species of zooplankton and phytoplankton, snails, *Chironomous larvae*, *Rasbora* fishes were introduced in the aquarium. Water sample was analyzed for one month at one day interval. In a simulated experimental eutrophic model aquatic ecosystem, the BOD was depleted and the nutrients like phosphates, sulphates and nitrates were reduced significantly.

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