

## Wetlands of Yamuna Biodiversity Park

Wetlands of Yamuna Biodiversity Park have the typical landscape features having ecological niches such as deep water-, shallow water-, marshy-, seasonally wet zones. Such habitats support diverse biological communities including water purifiers such as phyto and zoo plankton and benthic fauna. Creation, re-organization and development of wetlands requires systematic ecological designing based on sound principles so that various depths and the gradients of a developed wetland are able to support the desired floral and faunal communities of the ecosystem. Other physical and biological attributes of the wetlands such as presence or absence of vegetation, patchiness or openness of vegetation, type of vegetation, type of phyto and zoo plankton and faunal composition particularly benthic fauna, influence the ecological functioning of the wetlands including the quality and quantity of water that the wetland stores and the recharge of ground water.



Restored wetland Yamuna Biodiversity Park (phase II) showing huge flock of birds  
*(Photo Contributed by DDA)*

The migratory and resident duck wetlands of Yamuna Biodiversity Park are perennial with varying depths from the center to the periphery and the water level is controlled by the water level in the Wazirabad reservoir. During the monsoon season the water level increases by 4'-6' from the lean period level and decreases to lean period level in the dry season. The migratory duck wetland of Yamuna Biodiversity Park Phase I covering an area of 7 acres has a variety of niches that support mainly diving ducks which includes both resident and migratory

birds. The resident birds include Spotbilled duck, Indian moorhen, Purple swamphen, Little cormorants, Darter, Pond heron etc. while migratory birds include Red crested pochard, Tufted duck, Eurasian wigeon, Large cormorant etc. These birds mainly feed upon the wetland vegetation, insects and fishes. The Yamuna Biodiversity Park's wetland is fully functional and self-sustainable ecosystem which integrates every trophic level viz. producer, consumer and decomposers.

The resident duck wetland, which extends about 1.5 km in length within the Yamuna Biodiversity Park, has a unique marsh community (*Tamarix-Phragmites* Community) which harbor thousands of Night herons. This might be the largest heronry in the floodplain of River Yamuna. This wetland also supports native fish and other resident wetland birds like Indian Moorhen, herons etc.



Wetlands of Yamuna Biodiversity Park Phase II during monsoon  
(Photo Contributed by DDA)

This wetland of over 100 acres has been restored by desilting the existing wetland in Yamuna Biodiversity Park Phase II. It impounds substantial amount of flood waters. It has unique benthic fauna and zoo- and phyto-plankton and also crustaceans which are characteristic of unpolluted riparian ecosystem and these have many ecological functions. These wetlands are also playing a crucial role in modulating local hydrology of the region, besides providing water for various anthropogenic purposes; these wetlands control floodwater and recharge ground

water. The aquifers of floodplain wetlands have hydrologic connections with the river through ground water shallow aquifers, which allows lateral flow of ground water and thus maintain the river flow in the lean season.



Overview of the visitor's zone showing representative ecosystems of the river basin  
*(Photo Contributed by DDA)*

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