

SEASONAL WETLANDS: A UNIQUE ECOSYSTEM FOR REGENERATION OF WILD FISH DIVERSITY

D.N.DAS[#], R.N.MANDAL ^{*} AND P.K.MUKHOPADHYAY^{**}

ABSTRACT : Seasonal wetlands occupy considerable areas of eastern India during rainy season, spread over mainly three states such as Bihar (40,000ha), West Bengal (46, 000ha), and Assam (1, 00, 000ha). Due to submergence, water retention period of such wetlands extends up to next 5-7 months with depths ranging from 0.5-1.0 metre. Importantly, existence of these wetlands has become phenomenal in biodiversity point of view. Two different ecological components, i.e. biotic and abiotic synchronize at a time, thus bringing about a dynamic aquatic ecosystem. In such habitats biotic organisms such as microbes, plankton, benthos, algae, periphyton, macrophytes, zooplankton, other aquatic fauna, including a wide range of fish accomplish their major part of life cycle, i.e. increase of progeny by means of reproduction. Simultaneously, abiotic factors with specific concentration as; DO (7-8ppm), pH (6.8-7.9), SC (180-384 μ mhos/cm), light intensity (2.0×10^4 – 4.2×10^4 lux), temperature (25-32^oC), other nutrient elements such as nitrogen (0.09-0.11%), phosphorus (91-145kg/ha), potassium (about 500kg/ha), organic carbon (0.95-11.13%) along with other compounds become favourable to facilitate all biological occurrence accomplished. Quantitative studies show that 68 phytoplankton genera, 39 zooplankton genera and other benthos serve as food sources to diverse fish species. About 80% of wild fish catch comes from these seasonal wetlands; as a result a large number of rural population can catch them and get nourished by way of easily available such nutritious food of high biological value.

*Wastewater Aquaculture Division
(Central Institute of Freshwater Aquaculture),
P.O. Rahara, Kolkata 700 118

[#]Dept. of Zoology, North Bengal University,
Siliguri, India,

^{**} Central Institute of Freshwater Aquaculture,
Kausalyaganga, Bhubaneswar-751002

E-mail of corresponding author: rnmandal2003@yahoo.com