

Title: **Potential Utilization of Aquatic Ecosystem Through It and tot System for Updating Productivity and Economic Stability for Fishing Communities in Indian Sub-Continent**

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Abstract: For proper utilization of Tal wetland ecosystem through natural resource management and for updating production system through the integration of fish-crop diversity and its proper implications to its farmers level through modernizing adaptive technologies as well, IT system, a composite zonewise TOT programmes (use of natural resources, farm demonstrations, farmers awareness camp, farmers day and participants training programmes etc.) were adopted for upliftment of rural economy in Indian sub-tropics. Wetlands a natural gift with full of natural resources were systematically utilized at its greater diversity for inland fish production system relating to permanent (2.5 ± 1.0 m of water depth round the year), semi-permanent (flooding during rainy of $2.0 \pm 1.0 - 1.5$ m of water depth & drying during summer) and temporary (flooding during rainy of $2.0 \pm 1.0 - 1.5$ m of water depth & drying during summer including part of winter) in nature. Attention was paid towards finding of newer types of aquaculture production innovation (fish-aquatic food crop diversity, organic aquaculture, eco-friendly balanced food habits, crop geometry & its management), which has contributed significantly in boosting up of production system to its saturated level. Through studies for characterization and realization the importance of aquaculture for fish-crop productive system than monocropping, nutritional quality and economical stability for the resource-poor farm families, demonstrations cum case studies were undertaken on fish variables [Live fishes as magur - *Clarias batrachus* & singi - *Heteropneustes fossilis* and sweet water fishes (rohu - *Labeo rohita* & katla - *Katla katla*)] along with 2 starch & protein-rich aquatic popular food crops (water chestnut - *Trapa bispinosa* Roxb., makhana - *Euryale ferox* Salisb.) integrately in the regions. Results were more encouraging and gained a substantial enough to reach its goal through the production system of different agro-zones. Fishes, immature fresh fruit kernels of water chestnut and mature seed kernels of makhana which are most popular, nutritious and remunerative, hence, were considered for cultivation in waste tal wetlands for the upliftment of socio-economics than that of present situation existing in these zones. Regarding production economics, GMR, NP and B-C ratio were also significant with the integrated system, which is being economically viable, particularly for upliftment of rural economy.