

Title: Technical Efficiency of Urban Fish Farming in Oyo State-Nigeria

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Abstract: The high demand for fish and its products that cannot be met by capture fisheries and importation but by domestic production through fish farming has made Urban aquaculture to attract increasing attention for its role in feeding people and recycling wastes in many parts of Nigeria.

This study made use of a cross-sectional data obtained from fish farmers in the two zones of Oyo State Agricultural Development Project (ADP) that were purposively selected because of the higher concentration of fish farms compared to other zones in the state. One hundred respondents were randomly chosen from a list of fish farms obtained from the Fisheries Department of the State Ministry of Agriculture and Natural Resources. The data collected was analysed using Data Envelopment Analysis (DEA) to obtain the overall technical efficiency which was further broken down into pure and scale efficiencies.

It was observed from the findings that the mean efficiencies of urban fish farms were estimated as 0.92; 0.97; and 0.95 for technical efficiency with constant and variable returns to scale and scale efficiency respectively. A weak but significant correlation was observed between the efficiency indexes obtained using the two scale assumption. Based on our findings, sampled fish farmers could increase their output through better use of available resources. In addition, a second stage Tobit regression shows the variation is also related to farm-specific attributes such as the farmers experience, the farm managers gender, age, and education.

Based on the empirical findings, policy implications and development strategies for improving efficiency of urban fish farms are briefly discussed.