# FISH FARMING, BLUE ECONOMY AND LIVELIHOOD SUSTAINABILITY IN KAINJI LAKE BASIN

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**ABSTRACT**
*The adoption of fish farming activities in Kainji lake basin continue to contribute to livelihood sustainability in Kainji Lake basin. A sample size of 118 fish farmers. Using a random sampling technique, 58 communities in the central strata of Kainji lake basin was sampled using questionnaire for data collection. The primary data collected through interviews are presented in scores, percentages, mean. The results indicated that the majority (about 39%) of the aquaculture farmers were within the age bracket of 37-47 years, while majority of them have aquaculture farming experience ranging from more than 1 year to 5 years. Many farmers adopted harvesting patterns more than once per year. The data established that fish farming in the central strata of Kainji Lake basin is significant to livelihood sustainability of natural resources.*
**Keywords: Fish farming, Blue economy, Livelihood, Kainji Lake Basin**

## INTRODUCTION

The blue economy is saving the water economy to attain sustainability (Bethel *et al*., 2021). The World Bank (2017) specifies that three challenges inhibit the potential to develop a good blue economy. As it is today, the current economic trends have rapidly degraded the natural ocean resources, while the second aspect is related to lack of investment in human capital geared towards employment and development in innovative blue economy sectors, and lastly, laughable maintenance of marine and ecosystem resources found in the ocean. It is no news that fisheries in the wild are now damaged and over-exploited due to overfishing and other vices (Sharafuddin *et al*., 2020). However, there is still plenty of room for aquaculture. Aquaculture is the fastest growing food sector with the supply of 58 percent of fish to global markets. Aquaculture is vital to the food security of the poorest countries especially. Fish farming (aquaculture) is an intervention activity that raises desired culture-able species of fish and aquatic animals for consumption. Aquaculture provides employment and nutrition for humans and animals (Landu, 2022).

It is important that to be able to take advantage of the full potential inherent in the blue economy, a conscious effort is required for effective inclusion and undiluted collaboration from all societal groups, particularly women, young people, local indigenous peoples, and the under-represented groups. In this context, traditional knowledge and practices can also provide culturally appropriate approaches given above. The objective of the paper was to examine fish farming contributions to blue economy and the relationship to sustainability.

## MATERIALS AND METHODS

The study was conducted in Kainji lake basin, Niger State, Nigeria. It is geographically located between latitude 9º30′ and 10º55′N, longitude 4º20′ and 4º40′ E (Landu, 2022). Using a random sampling technique on 118 fish farmers from 58 communities in the central strata of Kainji Lake basin using the instruments of questionnaire for the primary data collection. The result of the primary data collected through interviews are presented in scores and percentages.

## RESULT AND DISCUSSION

The result shows that 39% of the respondents were within the age bracket of 37-47 years, 25.4% were within the age bracket of 26-36 years, 20% were within the age bracket of 26-36 years, 18.6% are 15-25 years, 9.3% are 48-58years old and above 58 years old are 7.6% indicating that fish farming (aquaculture is suitable for all age groups (Table 1). The table also shows that the experience of the respondents in fish farming has 45.8% within 1-5years, 28.8% falls within 10 years and above and 6-10 years are 25.4%. Gender segregation shows that the male counterparts are 56.1% while the female gender is 34.9%. The respondents have religion segregation of Islam with 56.8%, Christian 33.9%, while others are 9.3%. Majority of the respondents harvest once yearly (41.5%), harvesting twice per year, 33.9% while more than twice is 24.6%. The tribe of the respondents has the highest as Hausa 29.7%, Bisan 21.2%, Nupe 17.8%, Urhobo 14.4%, Edo 9.3% and Yoruba 7.6%. The structure of pond ownership shows that 1-3 has 61.9%, pond ownership of 4-6 is 28.0% and more than 6 ponds is 10.2%.

**Table 1: Characteristics of the Respondents**

| Variable | Frequency | Percent |
|---|---|---|
| **Age of respondent (years)** | | |
| 15-25 | 22 | 18.6 |
| 26-36 | 30 | 25.4 |
| 37-47 | 46 | 39.0 |
| 48-58 | 11 | 9.3 |
| Above 58 | 9 | 7.6 |
| **Gender** | | |
| Male | 68 | 56.1 |
| Female | 50 | 34.9 |
| **Nos of ponds owned** | | |
| 1-3Ponds | 73 | 61.9 |
| 4-6Ponds | 33 | 28.0 |
| > 6ponds | 12 | 10.2 |
| **Years of Experience** | | |
| 1-5 | 54 | 45.8 |
| 6-10 | 30 | 25.4 |
| > 10 | 34 | 28.8 |
| **Nos of harvest per year** | | |
| Once | 49 | 41.5 |
| Twice | 40 | 33.9 |
| > twice | 29 | 24.6 |
| **Religion** | | |
| Christian | 40 | 33.9 |
| Islam | 67 | 56.8 |
| 0ther | 11 | 9.3 |
| **Tribe** | | |
| Bisan | 25 | 21.2 |
| Edo | 11 | 9.3 |
| Hausa | 35 | 29.7 |
| Urhobo | 15 | 14.4 |
| Yoruba | 9 | 7.6 |
| Nupe | 21 | 17.8 |
| **Total** | **118** | **100** |

All the tribes take part in fish farming activity with all the age groups' participation indicating that fish farming can contribute to sustainability of blues economy which is one of the principles of blue economy. The data collected shows that religion, age and gender participate in the activity which suggests that fish farming is relevant for employment. The fish farming data shows that there is no dominance of any particular age group. The data also shows that tribe is not a barrier for participation in fish farming activity. More so, as all religious groups participate freely in the trade; it satisfies the principle of sustainable fish farming. The fact that age groups are significantly represented in the data collected shows that respondents are comfortable with fish farming practices in the region.

## CONCLUSION

It is therefore concluded that stakeholders provide a conducive atmosphere for the realization of fish farming. More advocacy should be encouraged so that there will be an effective inclusion and active participation of all society.

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