**SOCIO-ECONOMIC ANALYSIS OF A SMALL SCALE FISHERY: A CASE STUDY OF *Pellonula leonensis* FISHERY IN OGUN COASTAL ESTUARY, SOUTH WEST NIGERIA**

**CHAPTER 4**

**4.0 RESULT**

**4.1 Socio-economic characteristics of fishermen engaged in Pellonula leonensis fishery**

The socio economic characteristics in this study includes; age, gender, ethnic group, marital status, household size, religion, educational level, fishing hours, fishing labour, membership of any social association, available infrastructures and length of involvement.

**4.1.1 Age distribution of respondents**

Table 1 below shows the distribution of age of respondents involved in *P. leonensis* fishery in the Ogun state coastal estuary. It shows that 52.1 % of the respondents fell within the age range of 31-40 years, while 22.3 % are within the age of 41-50 %, the percentage age below 30 years was 20.2 % and 5.3 % were older than 50 years. The mean age of the fishermen was 37.13 ± 8.80 years.

**Table 1: Distribution of fishermen by age**

|  |  |  |  |
| --- | --- | --- | --- |
| **Age (Years)** | **Frequency** | **Percentage** | **Mean ± SD** |
| <30 | 19 | 20.2 |  |
| 31-40 | 49 | 52.1 |  |
| 41-50 | 21 | 22.3 | 37.13 ± 8.80 |
| >50 | 5 | 5.3 |  |
| **Total** | **94** | **100** |  |

SD: Standard deviation

**4.1.2 Sex**

It was gathered that (91.5%) of the respondents are male, while (8.5%) where female as shown in Table 2.

**Table 2: Sex distribution of the Respondents**

|  |  |  |
| --- | --- | --- |
| **Sex** | **Frequency** | **Percentage** |
| Female | 8 | 8.5 |
| Male | 86 | 91.5 |
| **Total** | **94** | **100** |

**4.1.3 Marital status**

Table 3 revealed that 84.0 % of the respondents were married, 12.8 % were single, 2.1% and 1.1% are separated and widowed respectively.

**Table 3: Distribution of fishermen by marital status**

|  |  |  |
| --- | --- | --- |
| **Marital Status** | **Frequency** | **Percentage** |
| Single | 12 | 12.8 |
| Married | 79 | 84.0 |
| Separated | 2 | 2.1 |
| Divorced | 1 | 1.1 |
| **Total** | **94** | **100** |

**4.1.4 Education Level**

As presented in Table 4, 63.8 % of the respondent had primary education, while 17.0 % of the respondents had informal and secondary education each and respondents with tertiary education are just 2.1 %.

**Table 4: Distribution of fisherfolks by their education level**

|  |  |  |
| --- | --- | --- |
| **Level of education** | **Frequency** | **Percentage** |
| Informal | 16 | 17.0 |
| Primary | 60 | 63.8 |
| Secondary | 16 | 17.0 |
| Tertiary | 2 | 2.1 |
| **Total** | **94** | **100** |

**4.1.5 Household Size**

Table 5 shows that 44.7% of the respondents have a household size of 5-7 persons, 42.6% have 8-10 persons, 7.4% have less than 7 persons and 5.3% have over 10 persons. The mean household size was approximately 7 persons.

**Table 5: Household size distribution of respondents**

|  |  |  |  |
| --- | --- | --- | --- |
| **Household** | **Frequency** | **Percentage** | **Mean ± SD** |
| <4 | 7 | 7.4 |  |
| 5-7 | 42 | 44.7 | 7.45 ± 2.14 |
| 8-10 | 40 | 42.6 |  |
| >10 | 5 | 5.3 |  |
| **Total** | **94** | **100** |  |

**4.1.6 Family**

Table 6 below shows that 77.7% of the respondents are polygamous, while the remaining 22.3% practiced monogamy

**Table 6: Distribution of respondents by family**

|  |  |  |
| --- | --- | --- |
| **Family** | **Frequency** | **Percentage** |
| Monogamy | 21 | 22.3 |
| Polygamy | 73 | 77.7 |
| **Total** | **94** | **100** |

**4.1.7 Religion**

Out of the respondents sampled, Table 7, reveals that 54.3% practiced Christainity while 45.7% practiced Islam.

**Table 7: Distribution of respondents by religion**

|  |  |  |
| --- | --- | --- |
| **Religion** | **Frequency** | **Percentage** |
| Christianity | 51 | 54.3 |
| Islam | 43 | 45.7 |
| **Total** | **94** | **100** |

**4.1.8 Ethnicity**

Of all the respondents sampled, 100% belong to the Yoruba ethnic group.

**4.1.9 Fishing operation**

From the respondents sampled, 61.7% are full-time operators while 38.3% are part-time operators of *P. leonensis* fishery as presented in Figure 1 below

**4.1.10 Membership of association**

Figure 2 below, shows that 48.9% belong to an association while 51.1% do not belong to any association.

**4.1.10.1 Association**

Table 8 reveals that 52.1% do not belong to any association, while 27.7% belongs to co-operative society and 17.0% belongs to fisheries association and 3.2% belongs to both.

**Figure 1: Percentage distribution of fishing operations of respodents**

**Figure 2: Percentage distribution of respondents by membership of association**

**Table 8: percentage distribution of respondents who belongs to association**

|  |  |  |
| --- | --- | --- |
| **Association** | **Frequency** | **Percent** |
| No membership | 49 | 52.1 |
| Both | 3 | 3.2 |
| Co-operative | 21 | 27.7 |
| Fisheries association | 16 | 17.0 |
| **Total** | **94** | **100** |

**4.2 Fishing Activities**

**4.2.1 Fishing Experience**

Table 9 reveals that 28.7% of the respondents have more than 20 years fishing experience, 24.5% of respondents have 16-20 years, 22.3% of have 11-15 years while those with 6-10 years and less than 5 years have 17.0 and 7.4% respectively. The mean fishing experience was approximately 17 years

**Table 9: Distribution of respondents by fishing experience**

|  |  |  |  |
| --- | --- | --- | --- |
| **Fishing experience (Years)** | **Frequency** | **Percentage** | **Mean ± SD** |
| <5 | 7 | 7.4 |  |
| 6-10 | 16 | 17.0 |  |
| 11-15 | 21 | 22.3 | 16.74 ± 7.70 |
| 16-20 | 23 | 24.5 |  |
| >20 | 27 | 28.7 |  |
| **Total** | **94** | **100** |  |

**4.2.2 Fishing Times**

From Table 10 below, 23.4% of respondents goes fishing 4 times weekly, 22.3% goes 5 times, 20.2% goes fishing 3 and 6 times weekly, while 12.8% and 1.1% goes 7 and 2 times respectively. The mean fishing times per week is 5 times.

**Table 10: Distribution of respondent by number of fishing times weekly**

|  |  |  |  |
| --- | --- | --- | --- |
| **Fishing Time (Weekly)** | **Frequency** | **Percentage** | **Mean ± SD** |
| 2 | 1 | 1.1 |  |
| 3 | 19 | 20.2 |  |
| 4 | 22 | 23.4 | 5.44 ± 2.11 |
| 5 | 21 | 22.3 |  |
| 6 | 19 | 20.2 |  |
| 7 | 12 | 12.8 |  |
| **Total** | **94** | **100** |  |

**4.2.3 Fishing hours**

Of all the respondents sampled, Table 11, shows that 74.5% of spend less than 5 hours fishing daily while 18.1% and 7.4% spend 6-8 and more than 8 hours fishing daily respectively.

**Table 11: Distribution of respondents daily fishing hours**

|  |  |  |
| --- | --- | --- |
| **Fishing daily range** | **Frequency** | **Percentage** |
| <5 | 70 | 74.5 |
| 6-8 | 17 | 18.1 |
| >8 | 7 | 7.4 |
| **Total** | **94** | **100** |

**4.2.4 Secondary occupation**

Figure 3 shows that 57.4% of the respondents focus on *P. leonensis* fishery while 20.2% and 11.7% partaking in trading and motorcyclist as other source of income. Tailoring and farming are the least with 1.1 and 2.1% respondents respectively.  
**Figure 3: Percentage distribution of fishers by primary occupation**

**4.2.4 Level of catch**

Figure 4 below shows the percentage catch of respondents in *P. leonensis* fishery. 49% have medium catch, while 37% have large catch and 14% have low catch.

**Figure 4: Percentage distribution of catch by respondents**

**4.2.5 Record**

All respondent sampled during this study do not keep records of their catch

**4.3 Fish marketing and processing**

**4.3.1 Fishing engine and spouse**

From Figure 5 below, 36.2% of the respondents have their spouse fishing along with them, while 63.8% perform the exercise alone. Also, 75.5% have their own engine they fish with while 24.5% borrow to go fishing.

**4.3.2 Fishing persons per trip**

From Figure 6 below, 59.6% of fishermen involved in *P. leonensis* fishery go fishing with 3 persons per trip while, 30.9% goes onboard with 2 persons, 6.4% goes with 4 persons with 1.1% of the sampled population goes with either 1 or 5 or 6 persons per fishing trip.

**Figure 5: Percentage distribution of respondents with fishing engine and spouse**

**Figure 6: Percentage distribution of fishing persons per trip**

**4.3.4 Location of fish sales**

Figure 7 below shows that 72% of *P. leonensis* caught is sold at within the community, while 15% were sold at landing site and 13% are sold outside the community.

**Figure 7: Percentage distribution of area fish are sold**

**4.3.5 Fish forms sold**

From Figure 8 below, 50% of respondents revealed that fish caught are sold in its fresh state while, 44% sold there fish after been processed and 6% sold both its fresh and processed form.

**4.3.6 Fish preservation techniques**

Respondents involved in P. leonensis fishery reveals that 89% preserve their stock by smoking and drying while 11% use icing method as represented in Figure 9 below

**4.3.7 Availability of market**

**Figure 7: Percentage distribution of form of fish sold**

**Figure 9: Percentage distribution of fish preservation techniques**

Section D

Section E

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Problems | S | VS | NP | NS |
|  | Frequency (%) | Frequency (%) | Frequency (%) | Frequency (%) |
| Lack of funds | 21 22.3 | 73 77.7 | 0 | 0 |
| Aquatic invasion | 5 5.3 | 89 94.7 |  |  |
| No credit access | 19 20.2 | 75 79.8 |  |  |
| Gear destruction | 58 61.7 | 30 31.9 | 6 6.4 |  |
| Inadequate fish factory |  | 88 93.6 | 6 6.4 |  |
| Poor transportation | 1 1.1 | 50 53.2 | 20 21.3 | 23 24.5 |
| Postharvest loss | 31 33.0 | 34 36.2 | 16 17.0 | 13 13.8 |
| Harrassment | 4 4.3 | 45 47.9 | 38 40.4 | 7 7.4 |
| Poor market | 6 6.4 | 36 38.3 | 8 8.5 | 44 46.8 |
| Unstable prices | 52 55.3 | 31 33.0 | 5 5.3 | 9 9.6 |
| Health hazard | 21 22.3 | 46 48.9 | 18 19.1 | 9 9.6 |
| High gear cost | 9 9.6 | 82 87.2 |  | 3 3.2 |
| Poor storage | 16 17.0 | 78 83.0 |  |  |
| Lack of equipment | 1 1.1 | 93 98.9 |  |  |
| Lack of extension | 21 22.3 | 73 77.7 |  |  |
| Destruction of habitat | 20 21.3 | 63 67.0 | 11 11.7 |  |
| Water pollution | 20 21.3 | 62 66.0 | 12 12.8 |  |

Profitability

|  |  |
| --- | --- |
| **Variable** | **Mean** |
| Canoe Maintenance | 317.8 |
| Engine Maintenance | 3215.4 |
| Labour | 6835.1 |
| Petrol | 6514.9 |
| Lubrication | 2085.6 |
| Ice | 194.0 |
| Line | 72.9 |
| Kerosene | 31.9 |
| Firewood | 143.6 |
| Net mending | 194.7 |
| **Total Variable Cost** | **19606.0** |
| **Total Revenue** | **23936.2** |
| **Gross Margin/Week** | **4330.2** |