



ASEAN UNIVERSITY SYMPOSIUM FOR SUSTAINABLE FOOD SYSTEM

Per Capita Fish Consumption in Nay Pyi Taw Union Territory, Myanmar

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Introduction

- Food - necessity of life that must be satisfied before any other developmental issue
- Nutrition - plays a major part and is needed to sustain the metabolic processes
(Aydemir, 2018)
- Human - must eat the foods of both plant and animal origin
- Fish – one of the main source of animal proteins
(Che et al., 2022)
- Fish consumption - reduce heart disease, high blood pressure, cholesterol, Alzheimer's disease, and some cancers
(Harvard T.H. Chan School of Public Health, 2008)

Introduction (Contd.)

- Fisheries products – provide 75% of the daily protein needed for human consumption
(Menna, 2008)
- Myanmar - relied on fisheries as one of the vital component of its food security and economic livelihoods
- In Myanmar, fish - one of the most important sources of animal proteins
(World Fish, 2021)
- However, few research studies looking at fish consumption rates at the household-level in Myanmar
- Aquatic ecosystems of Myanmar would be under tremendous pressure as a result
- It was conducted - to explore the per capita fish consumption of the households

Objectives

- To investigate demographic characteristics, income, and expenditures of sample households in the study area
- To observe commonly consumed fish items of the sample households
- To identify the per capita fish consumption of the sample households in Nay Pyi Taw Union Territory

Methodology

Study Areas

- Zeyarthiri, Ottarathiri and Pobbathiri Townships, Nay Pyi Taw Union Territory

Sample Size

- 390 sample households

Sample Selection Criteria

- Main household members managing food at the households

Data Collection

- **Period:** November 2021
- **Sampling method:** Purposive random sampling method
- **Primary data:** demographic characteristics, income and expenditure condition, and fish consumption

Data Analysis

- Descriptive analysis of quantitative and qualitative data by using STATA statistical software

Per Capita Fish Consumption

$$\text{Per Capita Fish Consumption} = \frac{\text{amount of household monthly fish consumption}}{\text{total adult equivalent number of the household members}}$$

(Soe, et al., 2023, p.2)

Table 1. Adult equivalent conversion for the age group (years)

Age Group	Adult equivalent conversion factor	
≥ 60 years	Senior adult group	0.7
59-19 years	Adult group	1.0
18-10 years	Adolescence group	1.1
9-2 years	Young children group	0.7
\leq one year		0.5

Source: MOHS, 2019, p.36

Table 2. Different income groups of the sample households in the study areas

Income Group	Range
Low income group	US\$ 28 – US\$ 141/ month
Middle income group	US\$ 142 – US\$ 245/ month
High income group	US\$ 246 – US\$ 2030/ month

Source: Soe, et al., 2023, p.2

Results and Discussion

Table 3. Demographic characteristics of sample households (n= 390)

Items	Unit	Average	Minimum	Maximum	SD
Age	Year	44.24	18	75	12.15
Household size	No.	3.77	1	13	1.75

Source: Survey data of Department of Agricultural Economics, 2021

Table 4. Gender status of the sample respondents (n= 390)

Items	Frequency	Percentage
Male	21	5.38
Female	369	94.62

Source: Survey data of Department of Agricultural Economics, 2021

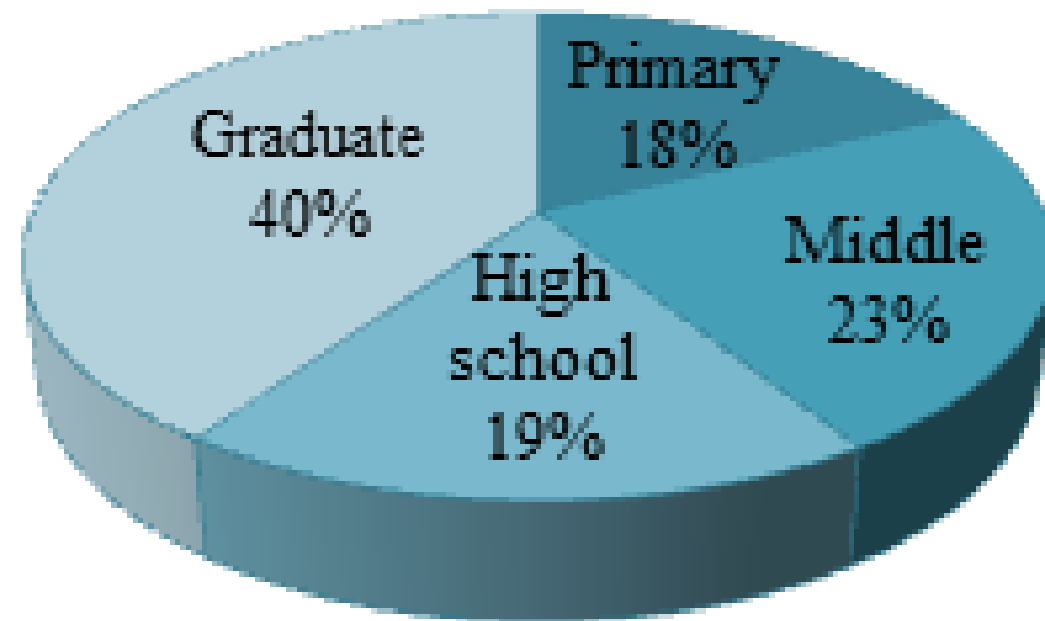


Figure 1. Education level of the sample respondents (n= 390)

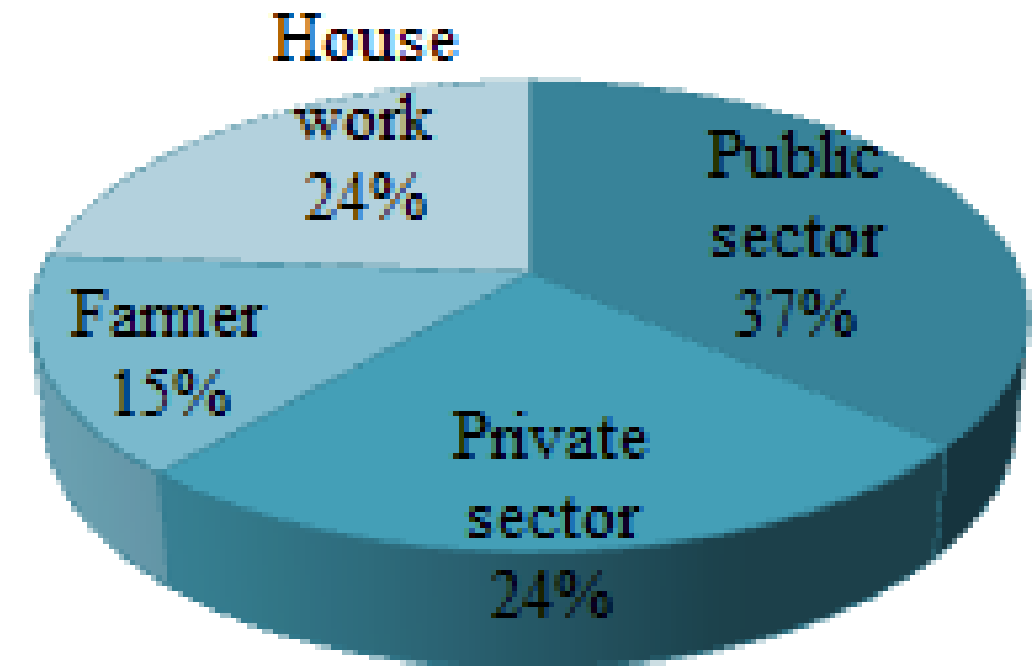


Figure 2. Occupation of the sample respondents (n= 390)

Source: Survey data of Department of Agricultural Economics, 2021

Table 5. Household members' distribution by age group of the sample households (n= 390)

Age group	Frequency	Percentage
≥ 60 years	142	9.68
59-19 years	963	65.64
18-10 years	216	14.72
9-2 years	133	9.07
≤ one year	13	0.89
Total	1,467	100.00

Source: Survey data of Department of Agricultural Economics, 2021

Table 6. Total household members by adult equivalent of the sample households (n= 390)

Items	Frequency
Total household members by age group	1,467
Total household members by adult equivalent	1,400

Source: Survey data of Department of Agricultural Economics, 2021

Table 7. Monthly household income, expenditure, food and fish cost of sample households (n= 390)

(Unit = US\$/month)

Items	Average	Minimum	Maximum	SD
Household income	227.04	28.20	2030.46	177.14
Household expenditure	165.20	28.20	676.82	89.05
Food expenditure	112.82	22.56	394.81	56.00
Fish expenditure	7.59	0.56	28.20	5.21

Source: Survey data of Department of Agricultural Economics, 2021

Note: 1 US\$ = 1773 MMK (Exchange rate of 1st November, 2021)

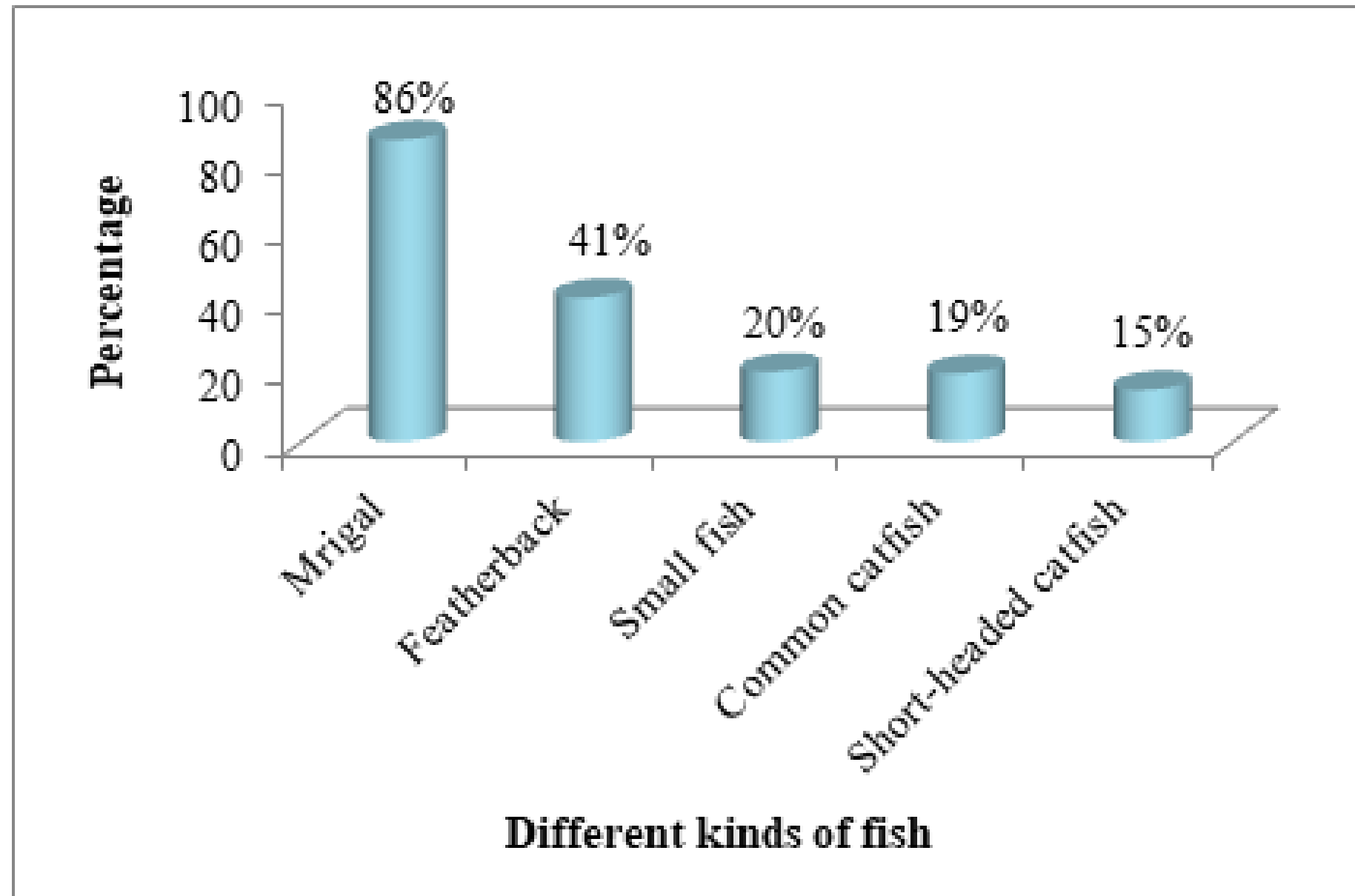


Figure 3. Five most-consumed species of fish of the households

Source: Survey data of Department of Agricultural Economics, 2021

Per capita fish and seafood consumption

- In 2021, world average annual per capita fish and seafood consumption – 19 kg

(Statista, 2023)

- Average annual per capita fish and seafood consumption of Cambodia – 38 kg, Laos – 26 kg, Vietnam – 28 kg in 2021

(FAO Stat, 2021)

- In 2021, Myanmar average annual per capita fish and seafood consumption – 30 kg

(World Fish, 2021)

Table 8. Per capita fish consumption of sample households (n= 1400)

(Unit = kg)

Items	Average	Minimum	Maximum	SD
Monthly consumption	0.82	0.03	4.35	0.63
Annual consumption	9.80	0.42	52.16	7.56

Source: Survey data of Department of Agricultural Economics, 2021

Table 9. Household members and adult equivalent of different income groups

Income group	Range/Month	No. Household members	Adult equivalent of household members
Low income group (n=126)	US\$ 28 – US\$ 141	434	409
Middle income group (n=147)	US\$ 142 – US\$ 245	515	491
High income group (n=117)	US\$ 246 – US\$ 2030	518	500

Source: Survey data of Department of Agricultural Economics, 2021

Table 10. Per capita fish consumption of different income groups of sample households

Items	Low income group (n= 409)		Middle income group (n=491)		High income group (n= 500)	
	kg/month	kg/year	kg/month	kg/year	kg/month	kg/year
Average	0.78	9.40	0.88	10.50	0.78	9.36
Minimum	0.16	1.96	0.03	0.42	0.07	0.86
Maximum	3.26	39.12	4.35	52.16	3.49	41.91
SD	0.56	6.70	0.69	8.28	0.62	7.50

Source: Survey data of Department of Agricultural Economics, 2021

Summary of Findings

- Average household size was 4 and the average age was 44 years
- Sample respondents were graduates and working in the governmental sector
- Fish items - mrigal, featherback, small fish, common catfish and short-headed catfish
- The adult equivalent ratio indicated that only 1,400 household members
- Per capita fish consumption - 9.80 kg

Conclusion and recommendation

- Household consumption - less than the per capita fish consumption rate estimated by World Fish Myanmar
- Consumption of fish-based products - was not taken into account when calculating the fish consumption rate
- Significant differences between the fish consumption rate reported on websites and the fish consumption rate of households in practice
- Fish consumption study on a national level - to know the rate of fish consumption by households in Myanmar

Conclusion and recommendation

- Fisheries sector - vital to the national economy and food security in Myanmar
- Myanmar fishery sector - important not only for the export but also for the domestic demand and public nutrition
- Useful information for policy makers who make strategies for developing the fishery sector by demand driven approaches
- In addition, assist to those who are studying the country's nutritional status

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