REPUBLIC OF THE PHILIPPINES
PHILIPPINE STATISTICS AUTHORITY

BAGONG PILIPINAS

Fisheries Situation Report for Major Species

July to September 2023

REPUBLIC OF THE PHILIPPINES

HIS EXCELLENCY
PRESIDENT FERDINAND ROMUALDEZ MARCOS, JR.

PHILIPPINE STATISTICS AUTHORITY

CLAIRE DENNIS S. MAPA, PhD
Undersecretary
National Statistician and Civil Registrar General

ISSN-2012-0400

FOREWORD

The **Fisheries Situation Report for Major Species, July to September 2023** is a quarterly statistical report on fisheries. It contains data on volume and value of fish production, and farmgate prices by major species.

This publication is a compilation of survey results for the four (4) fisheries subsectors, namely, commercial, municipal and inland fisheries, and aquaculture. The volume and value of production of different fish species are generated through the conduct of Quarterly Commercial Fisheries Survey (QCFS), Quarterly Municipal Fisheries Survey (QMFS), Quarterly Inland Fisheries Survey (QIFS), and Quarterly Aquaculture Survey (QAqS). Administrative-based data, sourced from the Philippine Fisheries Development Authority (PFDA), Local Government Units (LGUs), and private landing centers are also part of the compilation.

As in other publications released by the PSA, we invite our readers and data users to give comments and suggestions for further improvement of this report.

DIVINA GRACIA L. DEL PRADO, PhD
Assistant Secretary
Deputy National Statistician
Sectoral Statistics Office

Quezon City, Philippines
December 2023

TABLE OF CONTENTS

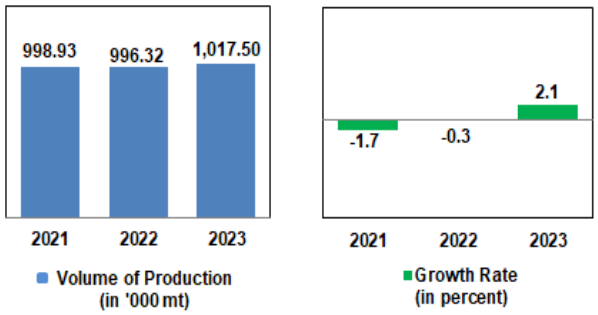
LIST OF TABLES

Table No. Page

HIGHLIGHTS
Volume of Production by Subsector and Species
July to September 2023

In the third quarter of 2023, the volume of fisheries production was posted at 1,017.50 thousand metric tons. This indicates an uptrend of 2.1 percent from the 996.32 thousand metric tons output in the same quarter of the previous year. Annual increments in production were noted in commercial fisheries, inland municipal fisheries, and aquaculture subsectors. However, marine municipal fisheries subsector reported an annual decline in production. (Figure 1 and Table 1)

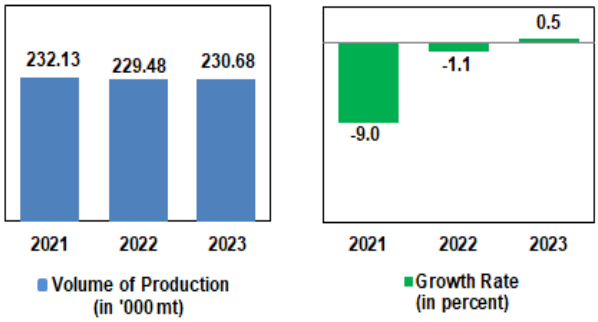
Figure 1. Volume and Annual Growth Rate of Fisheries Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, Quarterly Commercial Fisheries Survey (QCFS), Quarterly Municipal Fisheries Survey (QMFS), Quarterly Inland Fisheries Survey (QIFS), and Quarterly Aquaculture Survey (QAqS)

Commercial fisheries production in the third quarter of 2023 was recorded at 230.68 thousand metric tons. This represents an increase of 0.5 percent from the same quarter of the previous year's level of 229.48 thousand metric tons. The subsector comprised 22.7 percent of the total fisheries production during the period. (Figure 2 and Table 1)

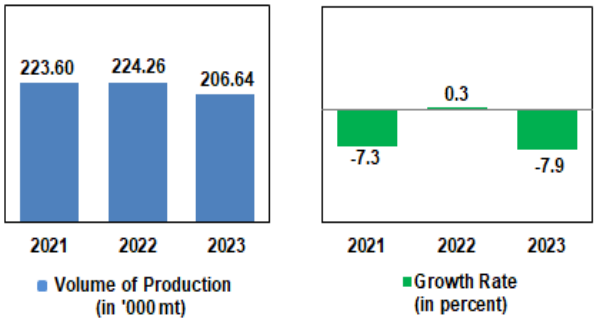
Figure 2. Volume and Annual Growth Rate of Commercial Fisheries Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Source: Philippine Statistics Authority, QCFS

The volume of production for marine municipal fisheries was estimated at 206.64 thousand metric tons. This indicates a reduction of 7.9 percent from the 224.26 thousand metric tons production in the same quarter of 2022. The subsector's share to the total fisheries production during the period was 20.3 percent. (Figure 3 and Table 1)

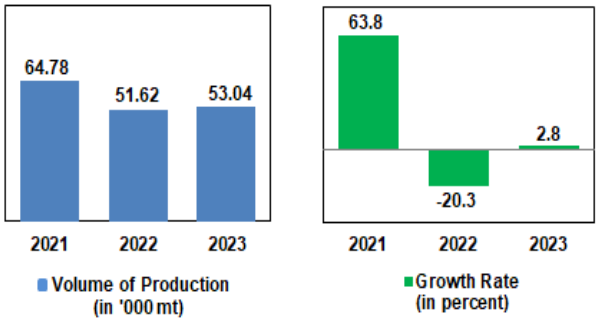
Figure 3. Volume and Annual Growth Rate of Marine Municipal Fisheries Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Source: Philippine Statistics Authority, QMFS

During the quarter, inland municipal fisheries production was reported at 53.04 thousand metric tons. This volume inched up by 2.8 percent from the 51.62 thousand metric tons output in the same period of the previous year. The subsector contributed 5.2 percent to the total fisheries production during the quarter. (Figure 4 and Table 1)

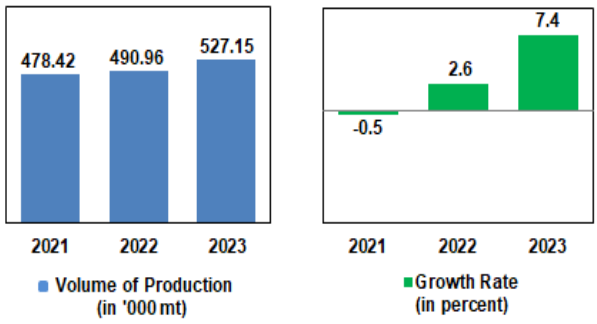
Figure 4. Volume and Annual Growth Rate of Inland Municipal Fisheries Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Source: Philippine Statistics Authority, QIFS

Aquaculture production was registered at 527.15 thousand metric tons in the third quarter of 2023. This was 7.4 percent higher than the 490.96 thousand metric tons output in the same period of 2022. The aquaculture subsector constituted the largest share of 51.8 percent to the total fisheries production during the quarter. (Figure 5 and Table 1)

Figure 5. Volume and Annual Growth Rate of Aquaculture Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Source: Philippine Statistics Authority, QAqS

Of the 20 major species, increments in the volume of fisheries production during the period were mainly driven by the annual increments noted in seaweed (14.0%), big-eyed scad (matangbaka, 32.8%), roundscad (galunggong, 17.2%), yellowfin tuna (tambakol/bariles, 28.5%), and indian mackerel (alumahan, 60.6%). (Table 2)

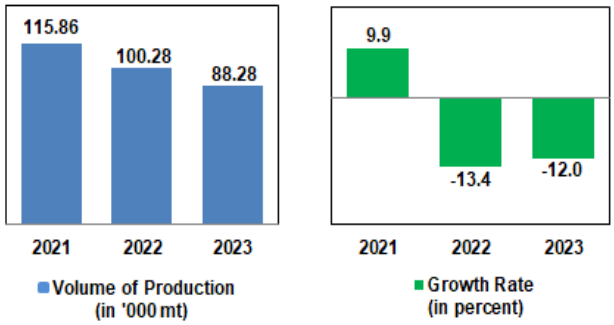
On the other hand, decreases were primarily reported in milkfish (bangus, -12.0%), skipjack (gulyasan, -12.6%), and fimbriated sardines (tunsoy, -37.8%). (Table 2)

Production of Major Species

1. Milkfish (Bangus)

a. Milkfish production during the third quarter of 2023 was estimated at 88.28 thousand metric tons. This represents a decline of 12.0 percent from the 100.28 thousand metric tons level in the same period of 2022. (Figure 6 and Table 2)

Figure 6. Volume and Annual Growth Rate of Milkfish Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QIFS and QAqS

b. Of the total fisheries output, milkfish production comprised 8.7 percent during the quarter. (Table 2)

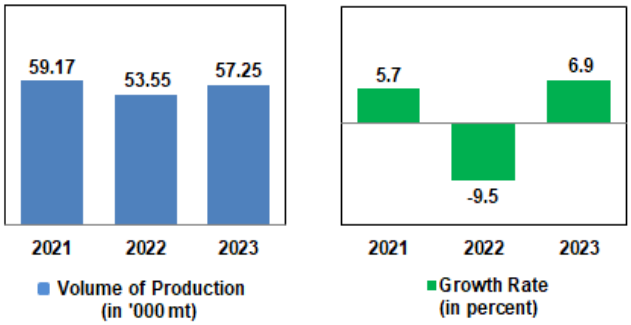
c. The gross value of milkfish production amounted to PhP 11.40 billion at current prices in the third quarter of 2023, representing a cutback of 7.5 percent from the same period of the previous year's value of PhP 12.32 billion. (Table 3)

d. On the average, the farmgate price per kilogram of milkfish was quoted at PhP 129.10, which shows a 5.1 percent increment from the third quarter of 2022 average farmgate price of PhP 122.85 per kilogram. (Table 4)

2. Tilapia

a. In the third quarter of 2023, tilapia production was registered at 57.25 thousand metric tons. This indicates an increase of 6.9 percent from the 53.55 thousand metric tons output in the same quarter of 2022. (Figure 7 and Table 2)

Figure 7. Volume and Annual Growth Rate of Tilapia Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QIFS and QAqS

b. About 5.6 percent of the total fisheries production for this quarter was contributed by tilapia harvests. (Table 2)

c. The value of tilapia production from July to September 2023 was recorded at PhP 5.20 billion at current prices. It grew by 11.6 percent from the same quarter of the previous year's value of PhP 4.66 billion. (Table 3)

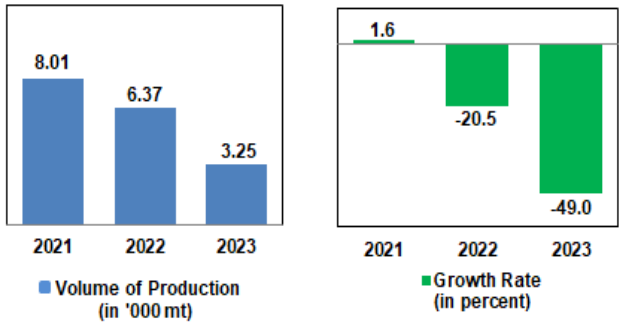
d. The national average farmgate price per kilogram of tilapia during the period was posted at PhP 90.85. It went up by 4.4 percent from the same period of the previous year's average farmgate price per kilogram of PhP 87.01. (Table 4)

3. Tiger prawn (Sugpo)

a. Tiger prawn production in the third quarter of 2023 was recorded at 3.25 thousand metric tons. This was 49.0 percent lower than the same quarter of 2022 production of 6.37 thousand metric tons. (Figure 8 and Table 2)

b. Tiger prawn caught this quarter contributed 0.3 percent to the total fisheries production in the third quarter of 2023. (Table 2)

Figure 8. Volume and Annual Growth Rate of Tiger Prawn Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QIFS and QAqS

c. At current prices, the gross value of production for tiger prawn amounted to PhP 1.94 billion in the third quarter of 2023. It went down by 23.6 percent from the PhP 2.54 billion value in the same quarter of 2022. (Table 3)

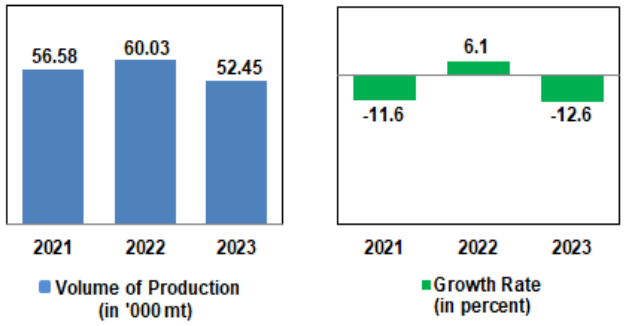
d. At the national level, the average farmgate price of tiger prawn for the third quarter of 2023 was quoted at PhP 596.27 per kilogram. This indicates an acceleration of 49.7 percent from the same quarter of the previous year's average farmgate price of PhP 398.37 per kilogram. (Table 4)

4. Skipjack (Gulyasan)

a. Skipjack production was estimated at 52.45 thousand metric tons during the third quarter of 2023. This reflects a decrease of 12.6 percent from the 60.03 thousand metric tons output in the same quarter of the previous year. (Figure 9 and Table 2)

b. Skipjack output accounted for 5.2 percent of the total fisheries production during the quarter. (Table 2)

Figure 9. Volume and Annual Growth Rate of Skipjack Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. At current prices, the gross value of skipjack production was registered at PhP 5.47 billion during the period. It decreased by 10.7 percent from its value of PhP 6.13 billion in the same quarter of 2022. (Table 3)

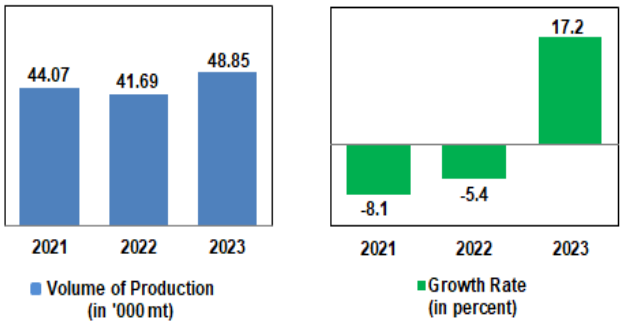
d. During the quarter, the average farmgate price of skipjack was recorded at PhP 104.37 per kilogram. It posted an increment of 2.2 percent from the same quarter of the previous year's average farmgate price quotation of PhP 102.10 per kilogram. (Table 4)

5. Roundscad (Galunggong)

a. A total of 48.85 thousand metric tons of roundscad was produced during the quarter. It increased by 17.2 percent from the same quarter of the previous year's output of 41.69 thousand metric tons. (Figure 10 and Table 2)

b. Roundscad production during the period shared 4.8 percent to the total volume of fisheries production. (Table 2)

Figure 10. Volume and Annual Growth Rate of Roundscad Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. During the quarter, the gross value of roundscad production reached PhP 5.04 billion at current prices. It exhibited an increment of 17.1 percent from the value of PhP 4.30 billion recorded in the same quarter of 2022. (Table 3)

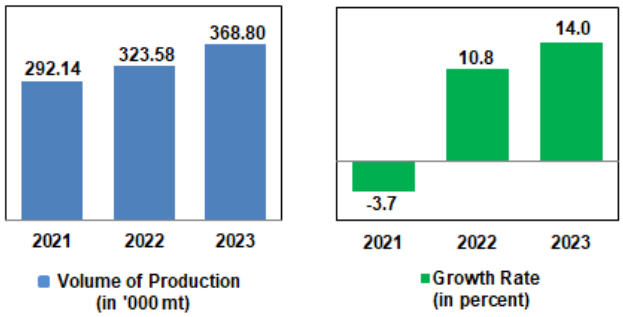
d. The average farmgate price of roundscad in the country was noted at PhP 103.10 per kilogram. This represents a decrease of 0.04 percent compared with its average farmgate price of PhP 103.14 per kilogram in the same period of the previous year. (Table 4)

6. Seaweed

a. The total seaweed harvested reached 368.80 thousand metric tons during the quarter, which indicates an increment of 14.0 percent from its output of 323.58 thousand metric tons in the same quarter of the previous year. (Figure 11 and Table 2)

b. Around 36.2 percent of the total fisheries production was contributed by the seaweed output during the period. (Table 2)

Figure 11. Volume and Annual Growth Rate of Seaweed Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Source: Philippine Statistics Authority, QAqS

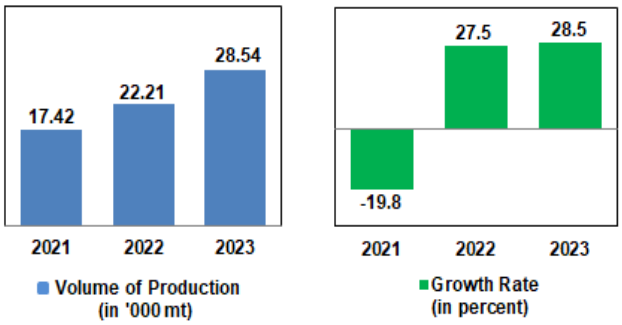
c. At current prices, the gross value of seaweed production amounted to PhP 2.51 billion, which reflects a double-digit deceleration of 33.9 percent from its same period value of PhP 3.80 billion in 2022. (Table 3)

d. At the national level, the average farmgate price of seaweed during the quarter was quoted at PhP 6.81 per kilogram. It registered a decline of 42.0 percent from its previous year's same quarter average farmgate price of PhP 11.74 per kilogram. (Table 4)

7. Yellowfin tuna (Tambakol/Bariles)

a. The production of yellowfin tuna in the third quarter of 2023 was recorded at 28.54 thousand metric tons. This represents a decrease of 28.5 percent from the 22.21 thousand metric tons output in the same period of the previous year. (Figure 12 and Table 2)

Figure 12. Volume and Annual Growth Rate of Yellowfin Tuna Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

b. Yellowfin tuna production constituted 2.8 percent of the total fisheries output during the quarter. (Table 2)

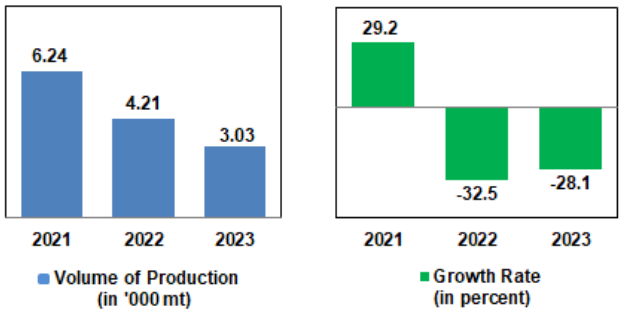
c. The gross value of yellowfin tuna production during the period amounted to PhP 4.17 billion at current prices. It increased by 18.1 percent from the PhP 3.53 billion earnings recorded in the same period of 2022. (Table 3)

d. The national average farmgate price of yellowfin tuna was observed at PhP 146.09 per kilogram, representing a decline of 8.1 percent from the same quarter's average farmgate price of PhP 158.88 per kilogram in 2022. (Table 4)

8. Mudcrab (Alimango)

a. During the third quarter of 2023, the mudcrab production was estimated at 3.03 thousand metric tons. It decelerated by 28.1 percent from the 4.21 thousand metric tons production in the same quarter of 2022. (Figure 13 and Table 2)

Figure 13. Volume and Annual Growth Rate of Mudcrab Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QIFS and QAqS

b. Mudcrab caught this quarter contributed 0.3 percent to the total fisheries production. (Table 2)

c. The gross value of production at current prices for mudcrab amounted to PhP 1.41 billion in the third quarter of 2023, which shows a decline of 8.8 percent from its PhP 1.55 billion value in the same quarter of 2022. (Table 3)

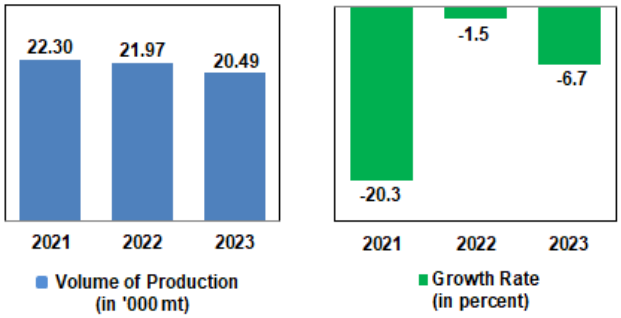
d. In the third quarter of 2023, the average farmgate price of mudcrab at the national level was recorded at PhP 466.24 per kilogram. This indicates an uptrend of 26.8 percent from the same period of the previous year's average farmgate price of PhP 367.83 per kilogram. (Table 4)

9. Frigate tuna (Tulingan)

a. The third quarter of 2023 frigate tuna production was recorded at 20.49 thousand metric tons, which was 6.7 percent lower than the same period of the previous year's production of 21.97 thousand metric tons. (Figure 14 and Table 2)

b. This quarter's production of frigate tuna shared 2.0 percent to the total fisheries production. (Table 2)

Figure 14. Volume and Annual Growth Rate of Frigate Tuna Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. At current prices, the production of frigate tuna during the quarter generated a total value of PhP 2.47 billion. This indicates an increase of 2.7 percent from the same quarter of the previous year's value of PhP 2.40 billion. (Table 3)

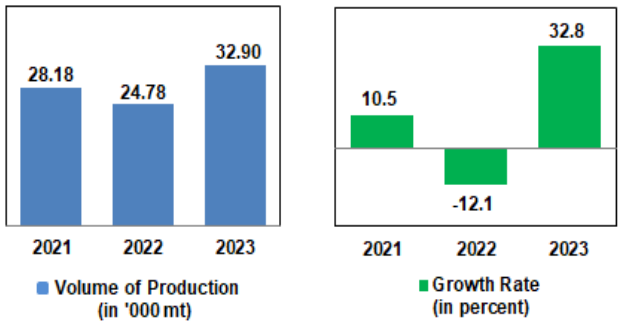
d. The average farmgate price of frigate tuna at the national level was quoted at PhP 120.35 per kilogram. This reflects an increment of 10.1 percent from the average farmgate price of PhP 109.31 per kilogram in the same period of 2022. (Table 4)

10. Big-eyed scad (Matangbaka)

a. The total volume of big-eyed scad production during the quarter was registered at 32.90 thousand metric tons. This indicates an increase of 32.8 percent from the same quarter of the previous year's level of 24.78 thousand metric tons. (Figure 15 and Table 2)

b. During the quarter, big-eyed scad production contributed 3.2 percent to the total fisheries production. (Table 2)

Figure 15. Volume and Annual Growth Rate of Big-eyed Scad Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. The gross value of big-eyed scad production at current prices amounted to PhP 3.93 billion during the quarter, indicating an increment of 35.6 percent from the same quarter of the previous year's value of PhP 2.90 billion. (Table 3)

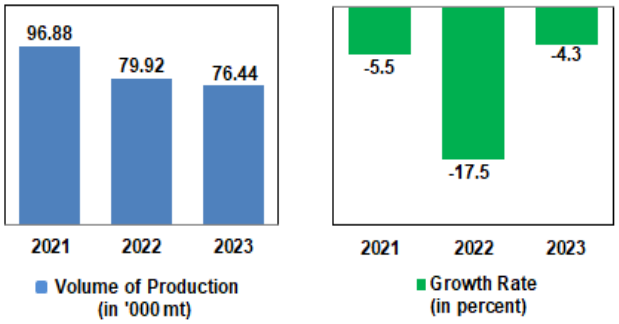
d. The average farmgate price of big-eyed scad for this quarter reached PhP 119.60 per kilogram. It posted an increase of 2.1 percent from its quotation of PhP 117.12 per kilogram in the same quarter of 2022. (Table 4)

11. Bali sardinella (Tamban)

a. A total of 76.44 thousand metric tons of bali sardinella was recorded during the third quarter of 2023. This reflects a decrease of 4.3 percent from the same period of the previous year's production of 79.92 thousand metric tons. (Figure 16 and Table 2)

b. The volume of bali sardinella production accounted for 7.5 percent of the overall fisheries production during the quarter. (Table 2)

Figure 16. Volume and Annual Growth Rate of Bali Sardinella Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. The total value of bali sardinella production during the quarter amounted to PhP 3.27 billion at current prices. It went up by 18.0 percent from its gross value in the same quarter of the previous year at PhP 2.77 billion. (Table 3)

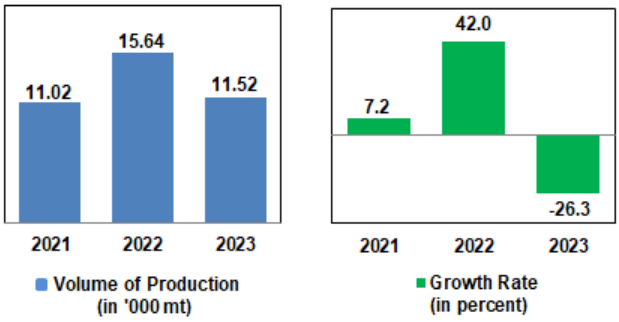
d. At the national level, the average farmgate price of bali sardinella was registered at PhP 42.78 per kilogram during the period. This was 23.3 percent higher than the same quarter of the previous year's record of PhP 34.69 per kilogram. (Table 4)

12. Squid (Pusit)

a. A total of 11.52 thousand metric tons of squid were produced during the quarter. It posted a reduction of 26.3 percent from its same period of the previous year's production of 15.64 thousand metric tons. (Figure 17 and Table 2)

b. Among the species, squid production accounted for 1.1 percent of the total fisheries production during the quarter. (Table 2)

Figure 17. Volume and Annual Growth Rate of Squid Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. In the third quarter of 2023, the gross value of squid production reached PhP 1.87 billion at current prices. This exhibits a reduction of 22.4 percent from its value of PhP 2.40 billion in the same quarter of the previous year. (Table 3)

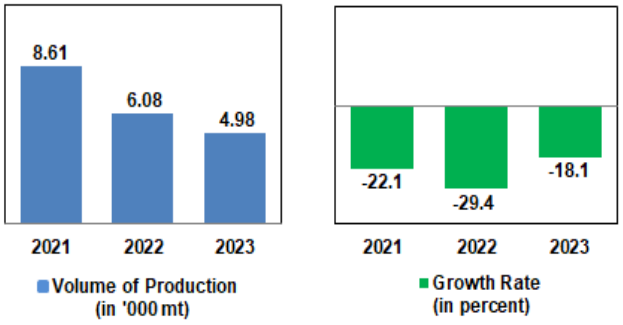
d. The national average farmgate price of squid was quoted at PhP 161.95 per kilogram, recording an increment of 5.4 percent from the average farmgate price of PhP 153.63 per kilogram in the same quarter of 2022. (Table 4)

13. Blue crab (Alimasag)

a. During the quarter, the total blue crab production reached 4.98 thousand metric tons. This was 18.1 percent lower than the 6.08 thousand metric tons output in the same quarter of the previous year. (Figure 18 and Table 2)

b. The blue crab production constituted 0.5 percent of the overall fisheries output during the quarter. (Table 2)

Figure 18. Volume and Annual Growth Rate of Blue Crab Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS, QMFS, and QIFS

c. The gross value of blue crab production for this quarter amounted to PhP 0.90 billion at current prices, reflecting a downturn of 13.9 percent from the PhP 1.05 billion value in the same period of the previous year. (Table 3)

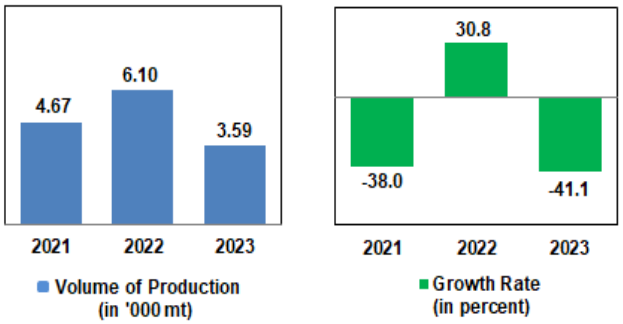
d. The average farmgate price of blue crab at the national level was recorded at PhP 180.93 per kilogram, representing a 5.1 percent increase from the average farmgate price of PhP 172.12 per kilogram in the same quarter of 2022. (Table 4)

14. Bigeye tuna (Tambakol/Bariles)

a. The total volume of bigeye tuna production during the quarter was estimated at 3.59 thousand metric tons. It exhibited a downturn of 41.1 percent compared with the same quarter production of 6.10 thousand metric tons in 2022. (Figure 19 and Table 2)

b. The output of bigeye tuna contributed 0.4 percent to the total fisheries production in the third quarter of 2023. (Table 2)

Figure 19. Volume and Annual Growth Rate of Bigeye Tuna Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. The gross value of bigeye tuna production during the quarter amounted to PhP 0.63 billion at current prices. This represents a decline of 34.5 percent from its previous year's same quarter value of PhP 0.96 billion. (Table 3)

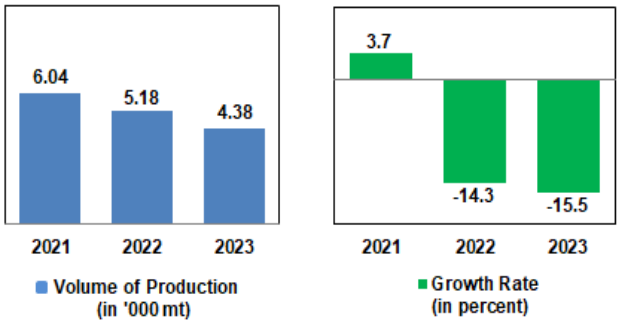
d. The average farmgate price of bigeye tuna was posted at PhP 175.37 per kilogram, recording an increase of 11.2 percent from its previous year's same quarter quotation of PhP 157.70 per kilogram. (Table 4)

15. Grouper (Lapu-lapu)

a. During the third quarter of 2023, the total grouper production was posted at 4.38 thousand metric tons. It recorded a reduction of 15.5 percent from the same quarter production of 5.18 thousand metric tons in the previous year. (Figure 20 and Table 2)

b. Of the total fisheries production, grouper production during the quarter comprised 0.4 percent. (Table 2)

Figure 20. Volume and Annual Growth Rate of Grouper Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS, QMFS, and QAqS

c. At the national level, the gross earnings from grouper output amounted to PhP 0.98 billion this quarter. This reflects a downtrend of 5.2 percent from the same quarter of 2022 value of PhP 1.03 billion. (Table 3)

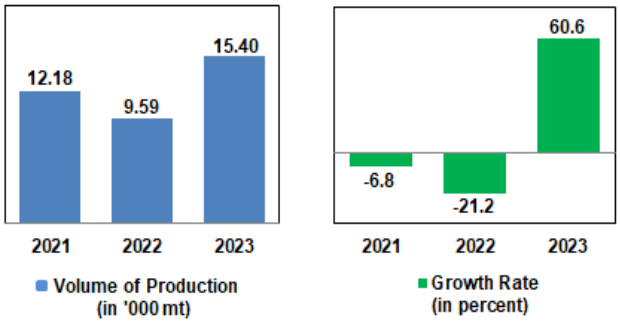
d. The average farmgate price of grouper was quoted at PhP 224.08 per kilogram this quarter. It increased by 12.2 percent from the previous year's same quarter price quotation of PhP 199.76 per kilogram. (Table 4)

16. Indian mackerel (Alumahan)

a. Indian mackerel production reached 15.40 thousand metric tons during the third quarter of 2023. This indicates an uptrend of 60.6 percent compared with the third quarter of 2022 level of 9.59 thousand metric tons. (Figure 21 and Table 2)

b. Indian mackerel production contributed 1.5 percent to the total fisheries production during the quarter. (Table 2)

Figure 21. Volume and Annual Growth Rate of Indian Mackerel Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. In the third quarter of 2023, Indian mackerel's total value of production at current prices was recorded at PhP 2.05 billion, registering an increase of 66.2 percent from the same period level of PhP 1.23 billion in the previous year. (Table 3)

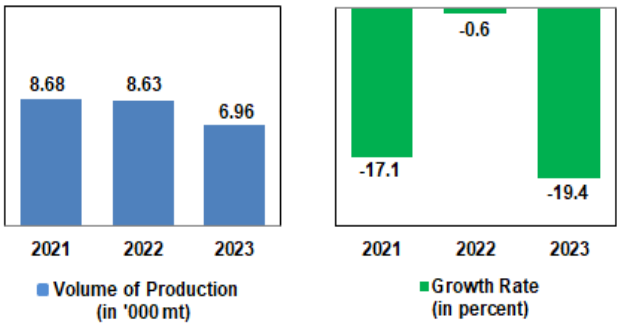
d. During the period, the average farmgate price of Indian mackerel at the national level was noted at PhP 133.00 per kilogram. It went up by 3.5 percent from the same period of the previous year's average farmgate price of PhP 128.52 per kilogram. (Table 4)

17. Threadfin bream (Bisugo)

a. The total volume of threadfin bream production during the period was estimated at 6.96 thousand metric tons. It registered a decrease of 19.4 percent from the same period of the previous year's output of 8.63 thousand metric tons. (Figure 22 and Table 2)

b. During the quarter, threadfin bream production shared 0.7 percent to the total fisheries output. (Table 2)

Figure 22. Volume and Annual Growth Rate of Threadfin Bream Production, Philippines: July to September 2021 to 2023P



P - preliminary
mt - metric ton
Source: Philippine Statistics Authority, QCFS and QMFS

c. The gross value of threadfin bream at current prices amounted to PhP 1.10 billion in the third quarter of 2023. This indicates a decline of 12.9 percent from its level of PhP 1.26 billion in the same quarter of the previous year. (Table 3)

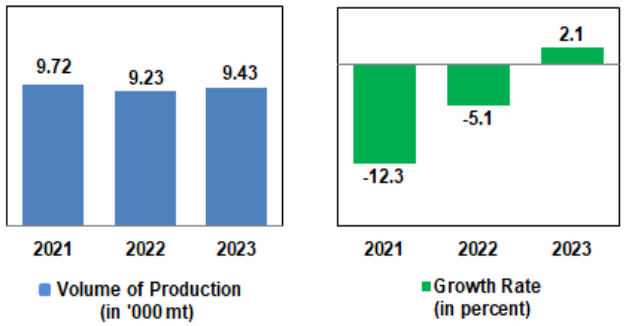
d. The average farmgate price of threadfin bream during the period was quoted at PhP 157.91 per kilogram. It increased by 8.0 percent from the same quarter of the previous year's price level of PhP 146.26 per kilogram. (Table 4)

18. Slipmouth (Sapsap)

a. The slipmouth production in the third quarter of 2023 was recorded at 9.43 thousand metric tons. It rose by 2.1 percent from the same period of the previous year's level of 9.23 thousand metric tons. (Figure 23 and Table 2)

b. Of the total fisheries output, slipmouth production shared 0.9 percent during the quarter. (Table 2)

Figure 23. Volume and Annual Growth Rate of Slipmouth Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. The value of slipmouth production at current prices amounted to PhP 0.69 billion during the quarter. This was 15.9 percent lower than the same quarter of the previous year's value of PhP 0.82 billion. (Table 3)

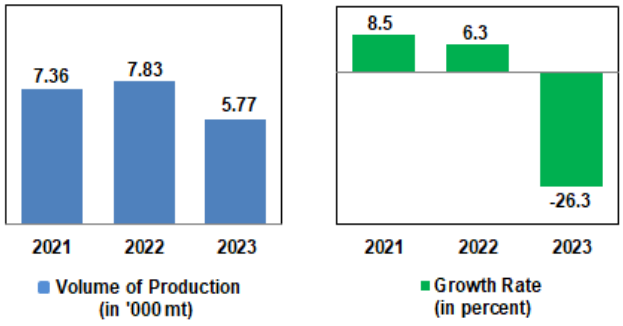
d. In the third quarter of 2023, the average farmgate price of slipmouth was reported at PhP 72.90 per kilogram. This reflects a decline of 17.7 percent from the average farmgate price of PhP 88.55 per kilogram in the same period of 2022. (Table 4)

19. Cavalla (Talakitok)

a. The estimated cavalla production for this quarter was 5.77 thousand metric tons. This indicates a decrease of 26.3 percent from the third quarter of the previous year's output of 7.83 thousand metric tons. (Figure 24 and Table 2)

b. Cavalla output shared 0.6 percent to the total fisheries production during the quarter. (Table 2)

Figure 24. Volume and Annual Growth Rate of Cavalla Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. The gross value of cavalla production reached PhP 0.93 billion at current prices during the period. This represents a decline of 24.3 percent from its value of PhP 1.23 billion in the same quarter of the previous year. (Table 3)

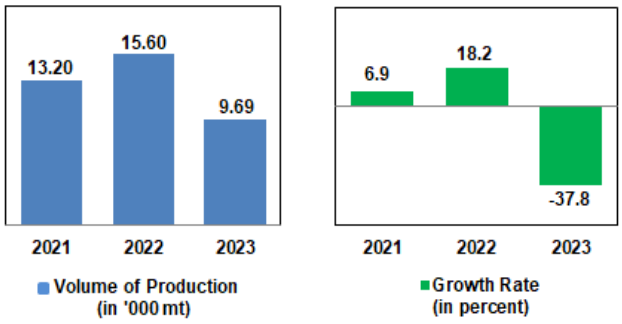
d. The national average farmgate price of cavalla was recorded at PhP 161.50 per kilogram. It climbed by 2.8 percent from the average farmgate price of PhP 157.10 per kilogram in the same quarter of 2022. (Table 4)

20. Fimbriated sardines (Tunsoy)

a. In the third quarter of 2023, fimbriated sardines production was registered at 9.69 thousand metric tons, which represents a decline of 37.8 percent from its 15.60 thousand metric tons output in the same period of 2022. (Figure 25 and Table 2)

b. Fimbriated sardines production contributed 1.0 percent to the overall fisheries production during the quarter. (Table 2)

Figure 25. Volume and Annual Growth Rate of Fimbriated Sardines Production, Philippines: July to September 2021 to 2023[P]



P - preliminary
mt - metric ton
Sources: Philippine Statistics Authority, QCFS and QMFS

c. The gross value of fimbriated sardines production during the quarter reached PhP 0.49 billion at current prices, recording a decrease of 37.9 percent from its value of PhP 0.78 billion in the third quarter of the previous year. (Table 3)

d. On the average, the farmgate price of fimbriated sardines in the third quarter of 2023 was quoted at PhP 50.03 per kilogram, which indicates a decrement of 0.1 percent from the previous year's same quarter average farmgate price of PhP 50.09 per kilogram. (Table 4)

TECHNICAL NOTES

I. Introduction

This Fisheries Situation Report is released every quarter, which presents the data on the volume and value of production of fisheries during the reference quarter. It contains information on the current situation by major species of the four fisheries subsectors, namely, commercial, municipal and inland fisheries, and aquaculture. The data are the results of the four fisheries surveys regularly conducted by the Philippine Statistics Authority (PSA). These surveys are the following:

a. Quarterly Commercial Fisheries Survey (QCFS);
b. Quarterly Municipal Fisheries Survey (QMFS);
c. Quarterly Inland Fisheries Survey (QIFS); and
d. Quarterly Aquaculture Survey (QAqS).

The volume of production also includes compilation from administrative records of Philippine Fisheries Development Authority (PFDA), Local Government Units (LGUs), and privately-managed landing centers.

Geographic classification is based on the latest Philippine Standard Geographic Code (PSGC). The 20 major species highlighted in this report were identified based on their value of production at constant 2018 prices.

II. Data Collection

A. Surveys

1. Quarterly Commercial Fisheries Survey (QCFS)

a. Data collection procedure

The QCFS gathers data on volume of unloading of sample boats in the sample traditional landing centers of the subsector in 58 provinces. The hired Statistical Researchers (SRs) conduct the interview of sample boats in the landing center during the data collection days. The data collection is done every week during the reference quarter.

b. Survey Questionnaire

A structured survey form (QCFS Form 1) is used to collect information. The information being gathered are volume of unloading and price per kilogram of the top 31 species and those under the others category. The data items collected include sample identification, boat information,

fishing effort, and fish unloading. Correspondingly, the schedule of data collection and daily information per month are recorded in the QCFS Form 1b.

2. Quarterly Municipal Fisheries Survey (QMFS)

a. Data collection procedure

The QMFS gathers data on volume of unloading of sample boats in the sample traditional landing centers of the subsector in 67 provinces. The SRs conduct interview of sample boats in the landing center during the data collection days. The data collection is done every week during the reference quarter.

b. Survey Questionnaire

A structured survey form (QMFS Form 1) is used to collect information. The information being gathered are volume of unloading and price per kilogram of the top 31 species and those under the others category. The data items collected include sample identification, boat information, fishing effort, and fish unloading. Correspondingly, the schedule of data collection and daily information per month are recorded in the QMFS Form 1b.

3. Quarterly Inland Fisheries Survey (QIFS)

a. Data collection procedure

The QIFS gathers data on volume of catch of sample inland fishing households. The SRs inquire about the monthly catch of the sample households during the reference quarter in 79 provinces. The data collection is done during second to third week of the last month of the quarter, except on the last quarter of the year where data collection is a month earlier.

b. Survey Questionnaire

QIFS Form 1 is utilized to obtain data from household head or any knowledgeable member of the sample household. The survey form captures the volume of catch and price per kilogram of the 34 inland species.

4. Quarterly Aquaculture Survey (QAqS)

a. Data collection procedure

The QAqS provides the volume and value of production for the aquaculture subsector. It covers aquafarm types in various water environment, such as brackishwater fishpond, pen and cage; freshwater fishpond, pen and cage; marine pen and cage; oyster; mussel; seaweed; rice fish; and small farm reservoir (SFR) in 83 provinces. The respondents are the owner, operator and/or caretaker of the sample aquafarms. The data collection is done every second to third week of the last month of the quarter, except on the last quarter of the year where data collection is a month earlier.

b. Survey Questionnaire

Data gathered using the prescribed collection forms include volume of harvests of species cultured and price per kilogram of the aquafarm. The survey covers 17 species. The QAqS utilizes two survey forms, namely, QAqS Form 1 (Fishpond, Pen, Cage, Rice Fish, and Small Farm Reservoir) and QAqS Form 2 (Oyster, Mussel, and Seaweed).

B. Compilation of Administrative-based data from Commercial and Municipal Non-Traditional Landing Centers

1. Data collection procedure

Data collection is done on a monthly basis depending on the availability of data in the landing centers. The PSO staff and/or SR gather data from administrative records of non-traditional landing centers such as those that are managed by the Philippine Fisheries Development Authority (PFDA), Local Government Units (LGUs) and private entities for commercial subsector, and PFDA and LGUs only for municipal subsector.

2. Collection Forms

The collection forms are QCFS Form 2 and QMFS Form 2. These forms gather volume, price of fish species, and fishing ground.

III. Sampling Design of Fisheries Surveys

A. Quarterly Commercial Fisheries Survey (QCFS)

1. Sampling Frame

   The updated list of commercial fish landing centers serves as the sampling frame in the selection of sample landing centers. The said list was generated from the Listing of Marine Fish Landing Centers (LMFLC) which was conducted in September 2021. The enumeration unit for the survey is the landing center.

2. Sample Selection Procedure

   The selection of sample landing centers for QCFS utilizes probability proportional to size systematic sampling (PPS-Sys) where the average daily unloading (ADU) is the size measure.

   First stage : Selection of Landing Centers (PPS)
   Second stage: Selection of Boats (Systematic)

   For the first stage, the sampling rate is 25.0 percent of the total number of landing centers in the province with a minimum of three sample landing centers. If the total boats in a landing center is greater than eight, eight boats are sampled. Otherwise, all boats in the landing center are sampled. The frequency of data collection is one day per week, separate for day and night unloadings. The sample operators can be boat operator, technician, fisherman, and/or trader.

3. Domain

   The domain of the survey is province. In the case of National Capital Region, the region is the domain.

4. Estimation Procedure

   a. Weight

      PSU Weight

      The PSU weight is computed using the following formula:

$$\alpha_{ij} = \frac{X}{aX_i}$$

where:

α_{ij} - PSU weight of operator *j* in landing center *i*

X - total average daily unloading for the province

X_i - total average daily unloading for landing center *i*

a - number of sample landing centers for the province

SSU Weight

The SSU weight is computed using the following formula:

$$\beta_{ijmk} = \frac{B_{ijmk}}{b_{ijmk}}$$

where:

β_{ijmk} - SSU weight of boat *j* in landing center *i* for week *k* of month *m*

B_{ijmk} - total number of sample boats in landing center *i* for week *k* of month *m*

b_{ijmk} - number of sample boats in landing center *i* for week *k* of month *m*

b. Sampling Weight

Base Weight

The base weight is calculated as the product of PSU weights and SSU weights. The formula below illustrates the base weight calculation:

$$w_{ijmk} = \alpha_{ij} * \beta_{ijmk}$$

where:

w_{ijmk} - base weight of boat *j* in landing center *i* for week *k* of month *m*

α_{ij} - PSU weight of boat *j* in landing center *i*

β_{ijmk} - SSU weight of boat *j* in landing center *i* for week *k* of month *m*

Adjustment Factor 1

To take into account non-sampled fishing days for week *k,* the adjustment factor is as follows:

$$A_{imk} = F_{imk} * I_{imk}$$

where:

A_{imk} - adjustment factor for non-sampled fishing days in week *k* of month *m* for landing center *i*

F_{imk} - total number of fishing days in landing center *i* for week *k* of month *m*

I_{imk} - actual data collection status in landing center *i* for week *k* of month *m* (1 if with data collection, 0 otherwise)

Adjustment Factor 2

To take into account fishing days for weeks without data collection at month *m*, the adjustment factor is obtained as follows:

$$A_{im} = \frac{F_{im}}{f_{im}}$$

where:

$$F_{im} = \sum_{k=1}^{n_k} F_{imk} \qquad f_{im} = \sum_{k=1}^{n_k} F_{imk}\, I_{imk}$$

A_{im} - adjustment factor for non-fishing days in month *m* of landing center *i*

F_{im} - total number of fishing days for month *m* of landing center *i*

f_{im} - total number of represented fishing days for month *m* of landing center *i*

F_{imk} - total number of fishing days in landing center *i* for week *k* of month *m*

I_{imk} - actual data collection status in landing center *i* for week *k* of month m (1 if with data collection, 0 otherwise)

n_k - number of weeks in month *m*

Final Weight

The final weight is then computed by obtaining the product of the base weight and the adjustment factors.

$$w'_{ijmk} = w_{ijmk} * A_{imk} * A_{im}$$

where:

w'_{ijmk} - final weight of boat *j* in landing center *i* for week *k* of month *m*

w_{imjk} - base weight of boat *j* in landing *i* for week *k* of month *m*

A_{imk} - adjustment factor for non-sampled fishing days for week *k* of month *m* in landing center *i*

A_{im} - adjustment factor for weeks with fishing days but no data collection in landing center *i* for month *m*

c. Estimation of Totals (Based on the Results of the Survey)

The estimate of the provincial total volume of production is computed using the following formula:

$$\hat{Y}_p = \sum_{i=1}^{a} \sum_{j=1}^{n_i} \sum_{m=1}^{3} \sum_{k=1}^{K_m} w'_{ijmk} * y_{ijmk}$$

where:

$\hat{Y}p$ - estimate of total volume of production based on the results of the survey for the province

w'_{ijmk} - final weight of boat *j* in landing center *i* for week *k* of month *m*

y_{ijmk} - volume of production of boat *j* in landing center *i* for week *k* of month *m*

a - total number of sampled landing centers in the province

n_i - number of sampled boats in landing center *i*

K_m - total number of weeks in month *m*

d. Total Volume of Production for Commercial Fisheries

To obtain the total volume of production for commercial fisheries, the estimate based on the results of the survey is added to the volume of production from non-traditional landing centers compiled from the administrative records of PFDA, LGUs, and privately-managed landing centers. The formula is as follows:

$$\widehat{Y'}_p = \hat{Y}_p + X$$

where:

$\widehat{Y'}p$ - estimate of total volume of production for commercial fisheries

$\hat{Y}p$ - estimate of total volume of production based on the results of the survey for the province

X - administrative data on volume of production from non-traditional landing centers for the province

The estimate of the regional total volume of production is computed using the following formula:

$$\hat{Y}r = \sum_{p=1}^{n_p} \hat{Y}'p$$

where:

$\hat{Y}r$ - estimate of total volume of fish production for the region
$\hat{Y}'p$ - estimate of total volume of fish production for the province
n_p - total number of provinces in the region

The estimate of the national total volume of production is computed using the following formula:

$$\hat{Y} = \sum_{r=1}^{n_r} \hat{Y}r$$

where:

$\hat{Y}$ - estimate of total volume of fish production at the national level
$\hat{Y}r$ - estimate of total volume of fish production for the region
n_r - total number of regions with commercial landing center

B. Quarterly Municipal Fisheries Survey (QMFS).

1. Sampling Frame

The updated list of municipal fish landing centers serves as the sampling frame in the selection of sample landing centers. The said list was generated from the Listing of Marine Fish Landing Centers (LMFLC) which was conducted in September 2021. The enumeration unit for the survey is the landing center.

2. Sample Selection Procedure

The selection of sample landing centers for QMFS uses two-stage stratified sampling design with landing center serving as the primary sampling unit (PSU) and the boats unloaded as the secondary sampling unit (SSU). The average daily unloading (ADU) serves as the stratification variable.

First stage : Selection of Landing Centers per Stratum (Systematic)
Second stage: Selection of Boats (Systematic)

The sampling rate is 10.0 percent of the total number of landing centers in the province but with a minimum of three sample landing centers. For each

sample landing center, 10 boats are selected if total boats unloaded are more than 10, but complete enumeration if total boats is 10 or less. The frequency of data collection is one day per week, separate for day and night unloadings. The sample operators can be boat operator, technician, fisherman, and/or trader.

3. Domain

The domain of the survey is province. In the case of National Capital Region, the region is the domain.

4. Estimation Procedure

a. Weights

PSU Weight

The PSU weight is computed using the following formula:

$$\alpha_{hij} = \frac{A_h}{a_h}$$

where:
α_{hij} - PSU weight of boat *j* in landing center *i* at stratum *h*
A_h - total number of landing centers for the province at stratum *h*
a_h - number of sample landing centers for the province at stratum *h*

SSU Weight

The SSU weight is computed using the following formula:

$$\beta_{hijmk} = \frac{B_{hijmk}}{b_{hijmk}}$$

where:
β_{hijmk} - SSU weight of boat *j* in landing center *i* at stratum *h* for week *k* of month *m*
B_{hijmk} - total number of sample boats in landing center *i* at stratum *h* for week *k* of month *m*

b_{hijmk} - number of sample boats in landing center *i* at stratum *h* for week *k* of month *m*

b. Sampling Weight

Base Weight

The base weight is calculated as the product of PSU weights and SSU weights. The formula below illustrates the base weight calculation:

$$w_{hijmk} = \alpha_{hij} * \beta_{hijmk}$$

where:

w_{hijmk} - base weight of boat *j* in landing center *i* at stratum *h* for week *k* of month *m*

α_{hij} - PSU weight of boat *j* in landing center *i* at stratum *h*

β_{hijmk} - SSU weight of boat *j* in landing center *i* at stratum *h* for week *k* of month *m*

Adjustment Factor 1

To take into account the non-sampled fishing days for week *k,* the adjustment factor is as follows:

$$A_{himk} = F_{himk} * I_{himk}$$

where:

A_{himk} - adjustment factor for non-sampled fishing days for week *k* of month *m* in landing center *i* at stratum *h*

F_{himk} - total number of fishing days in landing center *i* at stratum *h* for week *k* of month *m*

I_{himk} - actual data collection status in landing center at stratum *h* for week *k* of month *m* (1 if with data collection, 0 otherwise)

Adjustment Factor 2

To take into account fishing days for weeks without data collection at month *m*, the adjustment factor is obtained as follows:

$$A_{him} = \frac{F_{him}}{f_{him}}$$

where:

$$F_{him} = \sum_{k=1}^{n_k} F_{himk} \qquad f_{him} = \sum_{k=1}^{n_k} F_{himk}\, I_{himk}$$

A_{him} - adjustment factor for non-fishing days in month *m* of landing center *i* at stratum *h*

F_{him} - total number of fishing days for month *m* of landing center *i* at stratum *h*

f_{him} - total number of represented fishing days for month *m* of landing center *i* at stratum *h*

F_{himk} - total number of fishing days in landing center *i* at stratum *h* for week *k* of month *m*

I_{himk} - actual data collection status in landing center *i* at stratum *h* for week *k* of month *m* (1 if with data collection, 0 otherwise)

n_k - number of weeks in month *m*

Final Weight

The final weight is then computed by obtaining the product of the adjusted base weight and the adjustment factors.

$$w'_{hijmk} = w_{hijmk} * A_{himk} * A_{him}$$

where:

w'_{hijmk} - final weight of boat *j* in landing center *i* at stratum *h* for week *k* of month *m*

w_{himjk} - base weight of boat *j* in landing center *i* at stratum *h* for week *k* of month *m*

A_{himk} - adjustment factor for non-sampled fishing days for week of landing center *i* for month *m* in landing center *i* at stratum *h*

A_{him} - adjustment factor for weeks with fishing days but no data collection in landing center *i* of month *m* at stratum *h*

c. Estimation of Totals (Based on the Results of the Survey)

The estimate of the provincial total volume of production is computed using the following formula:

Stratum *h* production

$$\hat{Y}_h = \sum_{i=1}^{a_h} \sum_{j=1}^{n_{hi}} \sum_{m=1}^{3} \sum_{k=1}^{K_m} w'_{hijmk} * y_{hijmk}$$

Provincial total

$$\hat{Y}_p = \sum_{h=1}^{L} \hat{Y}_h$$

where:

$\hat{Y}_p$ - estimate of total volume of production based on the results of the survey for the province

$\hat{Y}_h$ - estimate of total volume of fish production at stratum *h*

w'_{hijmk} - final weight of boat *j* in landing center *i* at stratum *h* for week *k* of month *m*

y_{hijmk} - volume of production of boat *j* in landing center *i* at stratum *h* for week *k* of month *m*

a_h - total number of sampled landing centers for stratum *h* of the province

n_{hi} - number of sampled boats in landing center *i* in stratum *h*

K_m - total number of weeks in month *m*

L - total number of strata

d. Total Volume of Production for Municipal Fisheries

To obtain the total volume of production for municipal fisheries, the estimate based on the results of the survey is added to the volume of production from non-traditional landing centers compiled from the administrative records of PFDA and LGUs. The formula is as follows:

$$\hat{Y}'_p = \hat{Y}_p + X$$

where:

$\hat{Y}'p$ - estimate of total volume of production for municipal fisheries

$\hat{Y}_p$ - estimate of total volume of production based on the results of the survey for the province

X - administrative data on volume of production from non-traditional landing centers for the province

The estimate of the regional total volume of production is computed using the following formula:

$$\hat{Y}r = \sum_{p=1}^{n_p} \hat{Y}'p$$

where:

$\hat{Y}r$ - estimate of total volume of fish production for the region

$\hat{Y}'p$ - estimate of total volume of fish production for the province

n_p - total number of provinces in the region

The estimate of the national total volume of production is computed using the following formula:

$$\hat{Y} = \sum_{r=1}^{n_r} \hat{Y}r$$

where:

$\hat{Y}$ - estimate of total volume of fish production for the national level

$\hat{Y}r$ - estimate of total volume of fish production for the region

n_r - total number of regions with municipal landing center

C. Quarterly Inland Fisheries Survey (QIFS)

1. Sampling Frame

The QIFS uses the 2012 Census of Agriculture and Fisheries (CAF) as its sampling frame. The frame was used to draw sample inland fishing households for the survey. The enumeration unit for the QIFS is the inland fishing household. An inland fishing household is a household with at least one member engaged in inland fishing.

2. Sample Selection Procedure

The QIFS uses a two-stage sampling design with barangay as the primary sampling unit (PSU) and inland fishing household as the secondary sampling Unit (SSU).

Sample barangays (PSUs) are selected using probability proportional to size (PPS) with sampling rate of 10.0 percent. The number of inland fishing households is used as the size measure. Sample inland fishing households (SSUs) are selected using simple random sampling (SRS) for each sample

barangay. The number of sample inland fishing households is 10 per barangay. For a sample barangay which has less than 10 inland fishing households, all households are taken as samples.

3. Domain

The domain of the survey is province. In the case of National Capital Region, the region is the domain.

4. Estimation Procedure

a. Sampling Weight

Base Weight

The base weight (w_{ij}) of a sample household in a barangay is computed using the following formula:

$$w_{ij} = \left(\frac{X}{aX_i}\right)\left(\frac{N_i}{n_i}\right)$$

where:
w_{ij} - weight of household *j* in barangay *i*
X - total number of inland fishing households for the province
X_i - total number of inland fishing households in barangay *i*
a - number of sample inland fishing barangays for the province
N_i - total number of inland fishing households in barangay *i*
n_i - number of sample inland fishing households in barangay *i*

Adjustment Factor

To account for non-response, the weight adjustment factor for province p (A_p) is computed as follows:

$$A_p = \frac{\sum_{i=1}^{a}\sum_{j=1}^{n_i} w_{ij}X_{1ij}}{\sum_{i=1}^{a}\sum_{j=1}^{n_i} w_{ij}X_{2ij}}$$

where:
A_p - adjustment factor for province *p*
w_{ij} - base weight of household *j* in barangay *i*
n_i - number of sample inland fishing households in barangay *i*

a - number of sample inland fishing barangays for the province
X_{1ij} - eligible status of sample inland fishing household *j* in barangay *i* (1 if eligible, 0 otherwise)
X_{2ij} - responding status of sample inland fishing household *j* in barangay *i* (1 if responding, 0 otherwise)

Final Weight

The final weight (w'_{ij}) is obtained by multiplying the base weight and adjustment factor as follows:

$$w'_{ij} = w_{ij} \times A_p$$

where:
w'_{ij} - final weight of household *j* in barangay *i*
w_{ij} - base weight of household *j* in barangay *i*
A_p - adjustment factor for province *p*

b. Estimation of Totals

The estimate of the provincial total volume of production is computed using the following formula:

$$\hat{Y}p = \sum_{i=1}^{a} \sum_{j=1}^{n_i} w'_{ij}\, y_{ij}$$

where:
$\hat{Y}p$ - estimate of total volume of fish production for the province
w'_{ij} - final weight of household *j* in barangay *i*
y_{ij} - volume of fish production of household *j* in barangay *i*
n_i - number of sample inland fishing household in barangay *i*
a - number of sample inland fishing barangays for the province

The estimate of the regional total volume of production is computed using the following formula:

$$\hat{Y}r = \sum_{p=1}^{n_p} \hat{Y}p$$

where:
$\hat{Y}r$ - estimate of total volume of fish production for the region
$\hat{Y}p$ - estimate of total volume of fish production for the province
n_p - total number of provinces in the region

The estimate of the national total volume of production is computed using the following formula:

$$\hat{Y} = \sum_{r=1}^{n_r} \hat{Y}r$$

where:

$\hat{Y}$ - estimate of total volume of fish production for the national level

$\hat{Y}r$ - estimate of total volume of fish production for the region

n_r - total number of regions with inland fishing households

D. Quarterly Aquaculture Survey (QAqS).

1. Sampling Frame

   The basis for the sampling frame of QAqS is the list of aquafarms by type and environment. The said list was the result of the Updating of List of Aquaculture Farms (ULAF) conducted in 2017. The ULAF results serve as basis in updating the sampling frame for the aquaculture survey which covers aquafarm types in various water environment, namely, brackishwater fishpond, pen and cage; freshwater fishpond, pen and cage; marine pen and cage; oyster; mussel; seaweed; rice fish; and small farm reservoir (SFR).

2. Sample Selection Procedure

   The sample selection for QAqS utilizes probability proportional to size systematic sampling (PPS-Sys) method with area of aquafarm as the size measure. Sample aquafarms are selected in each domain using systematic sampling by aquafarm type. Sampling rate is 15.0 percent of the total number of aquafarms with five aquafarms as the minimum for each aquafarm type in the province.

3. Domain

   The domain of the survey is province. In the case of National Capital Region, the region is the domain.

4. Estimation Procedure – since the aquafarm types are independent, the estimation will be done per aquafarm type.

a. Sampling Weight

Base Weight

The base weight of the sample aquafarm operator *i*, or w_i, in the province is given by the formula:

$$w_i = \frac{X}{aX_i}$$

where:

a - number of sample aquafarm in the province
X - total aquafarm area in the province
X_i - aquafarm area of the sample aquafarm

Adjustment Factor

To account for non-response, the weight adjustment factor for province *p* (A_p) is computed as follows:

$$A_p = \frac{\sum_{i=1}^{a} w_i X_{1i}}{\sum_{i=1}^{a} w_i X_{2i}}$$

where:

A_p - adjustment factor of province *p*
w_i - base weight of sample aquafarm *i*
X_{1i} - eligible status of sample aquafarm *i* (1 if eligible, 0 otherwise)
X_{2i} - responding status of sample aquafarm *i* (1 if eligible, 0 otherwise)
a - number of sample aquafarm in the province

Final Weight

The final weight (w_i') of the sample aquafarm *i* is obtained by multiplying the base weight and adjustment factor as follows:

$$w_i' = w_i * A_p$$

where:

w_i' - final weight of sample aquafarm *i*
w_i - base weight of sample aquafarm *i*
A_p - adjustment factor for province *p*

b. Estimation of Totals

The estimate of the provincial total volume of production is computed using the following formula:

$$\hat{Y}p = \sum_{i=1}^{a} w_i y_i$$

where:

$\hat{Y}p$ - estimate of total volume of fish production for the province
w_i - final weight of sample aquafarm *i*
y_i - production of aquafarm *i*
a - number of sample aquafarm in the province

The estimate of the regional total volume of production is computed using the following formula:

$$\hat{Y}r = \sum_{p=1}^{n_p} \hat{Y}p$$

where:

$\hat{Y}r$ - estimate of total volume of fish production for the region
$\hat{Y}p$ - estimate of total volume of fish production for the province
n_p - total number of provinces in the region

The estimate of the national total volume of production is computed using the following formula:

$$\hat{Y} = \sum_{r=1}^{n_r} \hat{Y}r$$

where:

$\hat{Y}$ - estimate of total volume of fish production for the national
$\hat{Y}r$ - estimate of total volume of fish production for the region
n_r - total number of regions with aquafarms

IV. Concepts and Definitions of Terms

Aquaculture refers to fishery operation involving all forms of raising and culturing of fish and other fishery species in marine, brackish water, and freshwater environment. Examples are fishponds, fish pens, fish cages, mussel, oyster, seaweed farms, and hatcheries.

Aquafarms are farming facilities used in the culture or propagation of aquatic species including fish, mollusk, crustaceans, and aquatic plants for purposes of rearing to enhance production.

Brackishwater refers mixture of seawater and freshwater with salinity that varies with the tide. Examples are estuaries, mangroves, and mouths of rivers where seawater enters during high tide.

Commercial fishing refers to the catching of fish with the use of fishing boats with a capacity of more than three gross tons for trade, business, or profit beyond subsistence or sports fishing.

Fishermen is a classification of workers who catch, breed, and raise fish, and cultivate other forms of aquatic life for sale or delivery on a regular basis to wholesale buyers, marketing organizations, or at markets.

Fisheries refer to all activities relating to the act or business of fishing, culturing, preserving, processing, marketing, developing, conserving, and managing aquatic resources and the fishery areas including the privilege to fish or take aquatic resources thereof (Republic Act No. 8550 otherwise known as “The Philippine Fisheries Code of 1998”).

Fisheries sector refers to the sector engaged in the production, growing, harvesting, processing, marketing, developing, conserving, and managing of aquatic resources and fishing areas.

Fishing refers to the taking of fishery species from their wild state or habitat with or without the use of fishing vessels.

Fishing boat is a type of watercraft, such as motorized/non-motorized banca, sailboat, motorboat, etc., either licensed or not, used for fishing purposes.

Fish cage refers to stationary or floating fish enclosure made of synthetic net wire/bamboo screen or other materials set in the form of inverted mosquito net (“hapa” type), with or without cover, with all sides either tied to poles staked to the water bottom or with anchored floats for aquaculture purposes.

Fishing gear is any instrument or device and its accessories utilized in taking fish and other fishery species.

Fishing grounds refer to areas in any body of water where fish and other aquatic resources congregate and become target of capture.

Fish pen is an artificial enclosure constructed within a body of water for culturing fish and fishery/aquatic resources made up of bamboo poles closely arranged in an enclosure with wooden materials, screen, or nylon netting to prevent escape of fish.

Fishpond refers to a body of water, artificial or natural, where fish and other aquatic products are cultured, raised, or cultivated under controlled conditions. This is a land-based type of aquafarm. Note that the setting-up of fish cages in ponds does not make the operation of fish cage and at the same time a fishpond.

Freshwater refers to water without salt or marine origin, such as generally found in lakes, rivers, canals, dams, reservoirs, paddy fields, and swamps.

Inland municipal fishing is the catching of fish, crustaceans, mollusks, and all other aquatic animals and plants in inland water like lakes, rivers, dams, marshes, etc. using simple gears and fishing boats, some of which are non-motorized with a capacity of three gross tons or less; or fishing not requiring the use of fishing boats.

Landing center is a place where the fish catch and other aquatic products are unloaded and traded.

Marine refers to seawater outside the coastal line such as Manila Bay, Visayan Sea, etc.

Municipal fishing covers fishing operation carried out with or without the use of a boat weighing three gross tons or less.

Mussel farming refers to the cultivation of mussel in suitable water area by any farming method with appropriate intents and purposes.

Oyster farming refers to the cultivation of oysters in suitable water areas by any method for production purposes.

Rice fish culture is an integrated farming system involving raising of fish in rice paddies.

Seawater refers to inshore and open waters and inland seas in which the salinity generally exceeds 20.0 percent.

Seaweed farming is the cultivation of seaweed in suitable water areas by any method with appropriate intensive care for production in commercial quantities.

Small farm reservoirs (SFR) are small bodies of water with an area of less than 10 km, e.g., small ponds, canals, irrigation canals, swamps, etc., which can be suitable for culture-based fisheries.

V. Dissemination of Results and Revision

Dissemination of Results

The quarterly fisheries estimates and Fisheries Situation Report for the year 2023 is released quarterly in the PSA Website with the following schedule:

Reference Quarter	Schedule of Release	
	Estimates for OpenStat	Fisheries Situation Report
Quarter 4 2022	30 January 2023	30 January 2023
Quarter 1 2023	15 May 2023	15 May 2023
Quarter 2 2023	15 August 2023	15 August 2023
Quarter 3 2023	15 November 2023	15 November 2023

Revision of Estimates

The fisheries statistics follows the revision policy as stipulated in the PSA Board Resolution No. 01, Series of 2017-119 dated 14 February 2017, which approves the revision of quarterly estimates on agricultural production, prices, and related statistics to be limited to the immediately preceding quarter and for the past three years with quarterly breakdown to be done only during May of the current year.

VI. Citation

Philippine Statistics Authority. (2023). *Technical Notes on Fisheries Statistical Report*. https://psa.gov.ph/technical-notes/fsr-2023

VII. Contact Information

Ms. REINELDA P. ADRIANO
Chief Statistical Specialist
Fisheries Statistics Division
(02) 83762063
r.adriano@psa.gov.ph

For data request, you may contact:
Knowledge Management and Communications Division
(02) 8462-6600 loc. 820
info@psa.gov.ph | kmcd.staff@psa.gov.ph

Table 1. Volume of Fisheries Production by Subsector: Philippines
July to September 2021 – 2023[P]

Subsector	Volume of Production (metric tons)			Percent Change (%)		Percent Share to Total Volume of Fisheries Production (%)
	2021	2022	2023[P]	2022/2021	2023[P]/2022	2023
Fisheries	**998,925.56**	**996,317.25**	**1,017,504.40**	**-0.3**	**2.1**	**100.0**
Commercial Fisheries	232,132.11	229,478.03	230,676.80	-1.1	0.5	22.7
Municipal Fisheries	288,376.03	275,878.77	259,676.65	-4.3	-5.9	25.5
Marine	223,596.20	224,263.39	206,639.00	0.3	-7.9	20.3
Inland	64,779.83	51,615.38	53,037.65	-20.3	2.8	5.2
Aquaculture	478,417.43	490,960.46	527,150.95	2.6	7.4	51.8

P - preliminary
Note: Percent change and percent share may yield different results when computed manually due to rounding.
Sources: Philippine Statistics Authority, Quarterly Commercial Fisheries Survey, Quarterly Municipal Fisheries Survey, Quarterly Inland Fisheries Survey, and Quarterly Aquaculture Survey

Table 2. Volume of Fisheries Production by Species: Philippines
July to September 2021 – 2023[P]

Species	Volume of Production (metric tons)			Percent Change (%)		Percent Share to Total Volume of Fisheries Production (%)
	2021	2022	2023[P]	2022/2021	2023[P]/2022	2023
Fisheries	**998,925.56**	**996,317.25**	**1,017,504.40**	**-0.3**	**2.1**	**100.0**
Milkfish (Bangus)	115,858.32	100,280.57	88,281.01	-13.4	-12.0	8.7
Tilapia	59,174.17	53,550.81	57,254.28	-9.5	6.9	5.6
Tiger prawn (Sugpo)	8,010.62	6,371.99	3,250.34	-20.5	-49.0	0.3
Skipjack (Gulyasan)	56,581.52	60,034.92	52,451.59	6.1	-12.6	5.2
Roundscad (Galunggong)	44,069.13	41,694.28	48,853.04	-5.4	17.2	4.8
Seaweed	292,140.29	323,577.15	368,797.89	10.8	14.0	36.2
Yellowfin tuna (Tambakol/Bariles)	17,415.24	22,213.05	28,537.11	27.5	28.5	2.8
Mudcrab (Alimango)	6,240.05	4,209.41	3,027.02	-32.5	-28.1	0.3
Frigate tuna (Tulingan)	22,300.60	21,967.98	20,487.59	-1.5	-6.7	2.0
Big-eyed scad (Matangbaka)	28,179.00	24,782.95	32,900.37	-12.1	32.8	3.2
Bali sardinella (Tamban)	96,876.98	79,916.60	76,441.80	-17.5	-4.3	7.5
Squid (Pusit)	11,019.94	15,643.52	11,521.79	42.0	-26.3	1.1
Blue crab (Alimasag)	8,608.59	6,075.23	4,978.52	-29.4	-18.1	0.5
Bigeye tuna (Tambakol/Bariles)	4,668.26	6,104.27	3,592.93	30.8	-41.1	0.4
Grouper (Lapu-lapu)	6,042.48	5,177.55	4,377.00	-14.3	-15.5	0.4
Indian mackerel (Alumahan)	12,178.05	9,591.67	15,404.70	-21.2	60.6	1.5
Threadfin bream (Bisugo)	8,680.82	8,626.95	6,956.36	-0.6	-19.4	0.7
Slipmouth (Sapsap)	9,721.92	9,229.97	9,426.76	-5.1	2.1	0.9
Cavalla (Talakitok)	7,362.15	7,827.96	5,767.26	6.3	-26.3	0.6
Fimbriated sardines (Tunsoy)	13,199.19	15,598.17	9,694.78	18.2	-37.8	1.0
Others	170,598.25	173,842.28	165,502.26	1.9	-4.8	16.3

P - preliminary
Note: Percent change and percent share may yield different results when computed manually due to rounding.
Sources: Philippine Statistics Authority, Quarterly Commercial Fisheries Survey, Quarterly Municipal Fisheries Survey, Quarterly Inland Fisheries Survey, and Quarterly Aquaculture Survey

Table 3. Value of Fisheries Production at Current Prices by Species: Philippines
July to September 2021 – 2023[P]

Species	Value of Production at Current Prices ('000 PhP)			Percent Change (%)		Percent Share to Total Value of Fisheries Production (%)
	2021	2022	2023[P]	2022/2021	2023[P]/2022	2023
Fisheries	**70,685,398.08**	**77,266,830.41**	**76,980,363.36**	**9.3**	**-0.4**	**100.0**
Milkfish (Bangus)	12,838,731.92	12,319,624.55	11,397,452.57	-4.0	-7.5	14.8
Tilapia	5,052,203.28	4,659,626.00	5,201,312.85	-7.8	11.6	6.8
Tiger prawn (Sugpo)	3,335,030.56	2,538,400.01	1,938,097.64	-23.9	-23.6	2.5
Skipjack (Gulyasan)	4,433,441.75	6,129,401.40	5,474,136.72	38.3	-10.7	7.1
Roundscad (Galunggong)	3,821,910.69	4,300,282.77	5,036,647.09	12.5	17.1	6.5
Seaweed	2,368,202.34	3,799,368.92	2,512,933.42	60.4	-33.9	3.3
Yellowfin tuna (Tambakol/Bariles)	2,443,276.33	3,529,155.77	4,169,008.76	44.4	18.1	5.4
Mudcrab (Alimango)	2,470,658.69	1,548,346.98	1,411,321.03	-37.3	-8.8	1.8
Frigate tuna (Tulingan)	1,957,505.49	2,401,298.41	2,465,607.86	22.7	2.7	3.2
Big-eyed scad (Matangbaka)	2,697,849.44	2,902,701.73	3,934,742.28	7.6	35.6	5.1
Bali sardinella (Tamban)	2,751,552.90	2,772,528.85	3,270,410.01	0.8	18.0	4.2
Squid (Pusit)	1,496,520.61	2,403,262.52	1,865,931.58	60.6	-22.4	2.4
Blue crab (Alimasag)	1,454,390.36	1,045,669.65	900,785.50	-28.1	-13.9	1.2
Bigeye tuna (Tambakol/Bariles)	651,659.93	962,663.07	630,084.28	47.7	-34.5	0.8
Grouper (Lapu-lapu)	1,110,206.73	1,034,253.81	980,817.07	-6.8	-5.2	1.3
Indian mackerel (Alumahan)	1,161,296.54	1,232,736.63	2,048,790.72	6.2	66.2	2.7
Threadfin bream (Bisugo)	1,300,188.41	1,261,767.43	1,098,500.54	-3.0	-12.9	1.4
Slipmouth (Sapsap)	597,990.41	817,288.83	687,203.14	36.7	-15.9	0.9
Cavalla (Talakitok)	1,128,621.64	1,229,770.40	931,433.97	9.0	-24.3	1.2
Fimbriated sardines (Tunsoy)	523,518.40	781,311.80	485,053.07	49.2	-37.9	0.6
Others	17,090,641.66	19,597,370.88	20,540,093.26	14.7	4.8	26.7

P - preliminary
Note: Percent change and percent share may yield different results when computed manually due to rounding.
Sources: Philippine Statistics Authority, Quarterly Commercial Fisheries Survey, Quarterly Municipal Fisheries Survey, Quarterly Inland Fisheries Survey, and Quarterly Aquaculture Survey

Table 4. Average Farmgate Price by Species: Philippines, July to September 2021 – 2023^{P}

Species	Average Price (PhP/Kg)			Percent Change (%)	
	2021	2022	2023^{P}	2022/2021	2023^{P}/2022
Fisheries					
Milkfish (Bangus)	110.81	122.85	129.10	10.9	5.1
Tilapia	85.38	87.01	90.85	1.9	4.4
Tiger prawn (Sugpo)	416.33	398.37	596.27	-4.3	49.7
Skipjack (Gulyasan)	78.35	102.10	104.37	30.3	2.2
Roundscad (Galunggong)	86.73	103.14	103.10	18.9	-0.04
Seaweed	8.11	11.74	6.81	44.8	-42.0
Yellowfin tuna (Tambakol/Bariles)	140.30	158.88	146.09	13.2	-8.1
Mudcrab (Alimango)	395.94	367.83	466.24	-7.1	26.8
Frigate tuna (Tulingan)	87.78	109.31	120.35	24.5	10.1
Big-eyed scad (Matangbaka)	95.74	117.12	119.60	22.3	2.1
Bali sardinella (Tamban)	28.40	34.69	42.78	22.1	23.3
Squid (Pusit)	135.80	153.63	161.95	13.1	5.4
Blue crab (Alimasag)	168.95	172.12	180.93	1.9	5.1
Bigeye tuna (Tambakol/ Bariles)	139.59	157.70	175.37	13.0	11.2
Grouper (Lapu-lapu)	183.73	199.76	224.08	8.7	12.2
Indian mackerel (Alumahan)	95.36	128.52	133.00	34.8	3.5
Threadfin bream (Bisugo)	149.78	146.26	157.91	-2.4	8.0
Slipmouth (Sapsap)	61.51	88.55	72.90	44.0	-17.7
Cavalla (Talakitok)	153.30	157.10	161.50	2.5	2.8
Fimbriated sardines (Tunsoy)	39.66	50.09	50.03	26.3	-0.1
Others	100.18	112.73	124.11	12.5	10.1

P - preliminary
Note: Percent change may yield different results when computed manually due to rounding.
Sources: Philippine Statistics Authority, Quarterly Commercial Fisheries Survey, Quarterly Municipal Fisheries Survey, Quarterly Inland Fisheries Survey, and Quarterly Aquaculture Survey

PSA

Fisheries Situation Report

For Inquiries:

PHILIPPINE STATISTICS AUTHORITY
PSA Complex, East Avenue, Diliman, Quezon City, Philippines 1101

Tel. No.+63(2) 84626600 loc. 820 • Telefax No.+63(2) 84626600 loc. 839

E-mail address: info@psa.gov.ph • kmcd.staff@psa.gov.ph