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REPUBLIC OF THE PHILIPPINES
PHILIPPINE STATISTICS AUTHORITY

BAGONG PILIPINAS

Fisheries Situation Report for Major Species

January to December 2024P

REPUBLIC OF THE PHILIPPINES

HIS EXCELLENCY
PRESIDENT FERDINAND ROMUALDEZ MARCOS, JR.

PHILIPPINE STATISTICS AUTHORITY

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Undersecretary
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FOREWORD

The **Fisheries Situation Report for Major Species, January to December 2024** is an annual statistical report on fisheries. This 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 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, Quarterly Municipal Fisheries Survey, Quarterly Inland Fisheries Survey, and Quarterly Aquaculture Survey. Administrative-based data sourced from the Philippine Fisheries Development Authority, Local Government Units, and private landing centers are also part of the compilation.

Similar to other publications released by the Philippine Statistics Authority, we invite our readers and data users to give comments and suggestions for further improvement of this report.

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Assistant Secretary
Deputy National Statistician
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Quezon City, Philippines
February 2025

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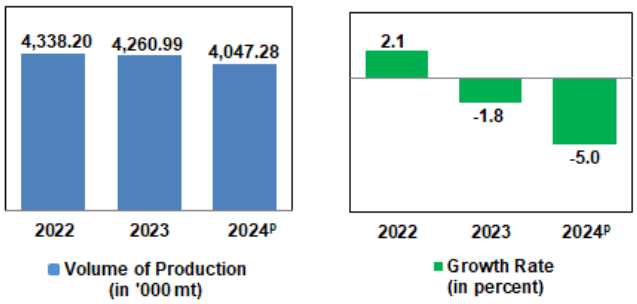
HIGHLIGHTS
Volume of Production by Subsector and Species
January to December 2024

In 2024, the total volume of fisheries production was recorded at 4.05 million metric tons. This indicates an annual decrease of 5.0 percent from the 4.26 million metric tons output in 2023. Decreases in production were noted in marine municipal fisheries, inland municipal fisheries, and aquaculture. Only commercial fisheries subsector displayed uptrend in production. (Figure 1 and Table 1)

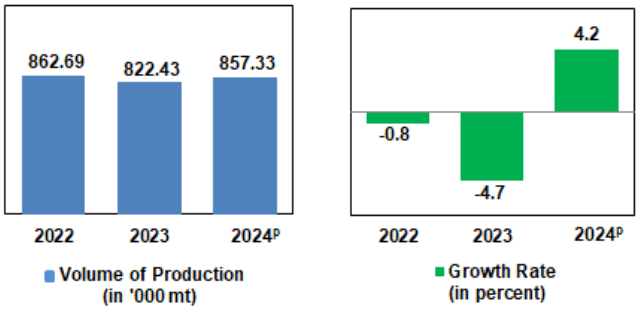
Figure 1. Volume and Annual Growth Rate of Fisheries Production, Philippines: January to December 2022 to 2024p



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)

The commercial fisheries production at 857.33 thousand metric tons posted a 4.2 percent annual increase from the previous year's output of 822.43 thousand metric tons. The subsector comprised 21.2 percent of the total fisheries production in 2024. (Figure 2 and Table 1)

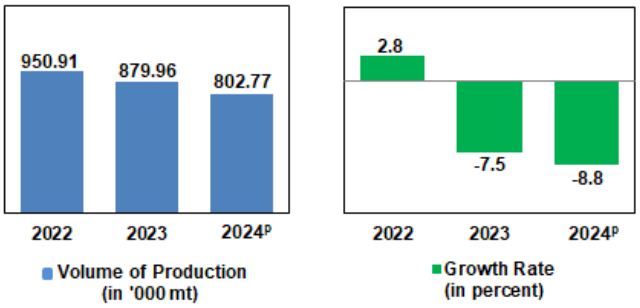
Figure 2. Volume and Annual Growth Rate of Commercial Fisheries Production, Philippines: January to December 2022 to 2024p



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

On marine municipal fisheries, the total volume of production was estimated at 802.77 thousand metric tons during the year. This was 8.8 percent lower than the 2023 level of 879.96 thousand metric tons. Of the total fisheries production, 19.8 percent was contributed by marine municipal fisheries subsector. (Figure 3 and Table 1)

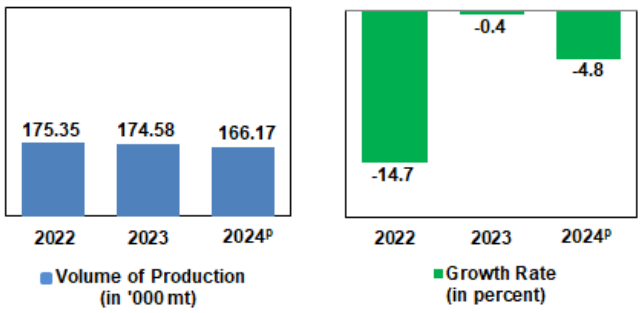
Figure 3. Volume and Annual Growth Rate of Marine Municipal Fisheries Production, Philippines: January to December 2022 to 2024p



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

During the year, inland municipal fisheries production was recorded at 166.17 thousand metric tons. This indicates an annual decrease of 4.8 percent from the 174.58 thousand metric tons output in 2023. The share of the inland municipal fisheries subsector to the total fisheries production was 4.1 percent. (Figure 4 and Table 1)

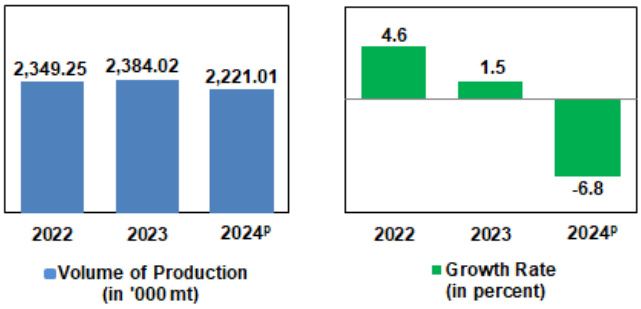
Figure 4. Volume and Annual Growth Rate of Inland Municipal Fisheries Production, Philippines: January to December 2022 to 2024p



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

The annual aquaculture volume of production was estimated at 2.22 million metric tons. This represents a decrease of 6.8 percent from the previous year's output of 2.38 million metric tons. The aquaculture subsector constituted the highest share of 54.9 percent to the total fisheries production in 2024. (Figure 5 and Table 1)

Figure 5. Volume and Annual Growth Rate of Aquaculture Production, Philippines: January to December 2022 to 2024p



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

The species that primarily contributed annual downtrend were seaweed (-10.5%), big-eyed scad (matangbaka, -20.0%), bali sardinella (tamban, -8.2%), and roundscad (galunggong, -9.8%). (Table 2)

On the other hand, increases were noted in skipjack (gulyasan, 31.2%), P. vannamei (putian, 32.3%), frigate tuna (tulingan, 8.6%), and milkfish (bangus, 1.6%). (Table 2)

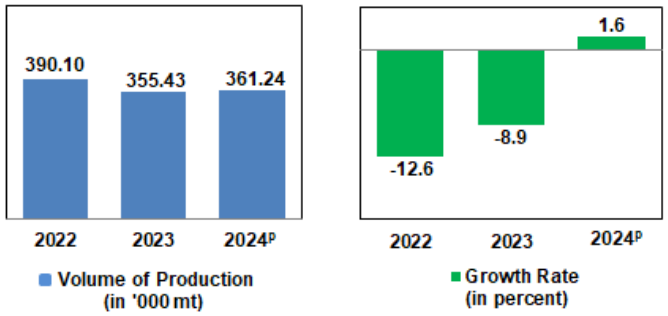
Production of Major Species

1. Milkfish (Bangus)

a. In 2024, milkfish production was recorded at 361.24 thousand metric tons, this indicates an increase of 1.6 percent from its output of 355.43 thousand metric tons of the previous year. (Figure 6 and Table 2)

b. Milkfish production comprised 8.9 percent of the total fisheries production during the year. (Table 2)

Figure 6. Volume and Annual Growth Rate of Milkfish Production, Philippines: January to December 2022 to 2024p



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

c. At current prices, the gross value of milkfish production amounted to PhP 45.05 billion, which went down by 1.8 percent from its 2023 gross value of PhP 45.86 billion. (Table 3)

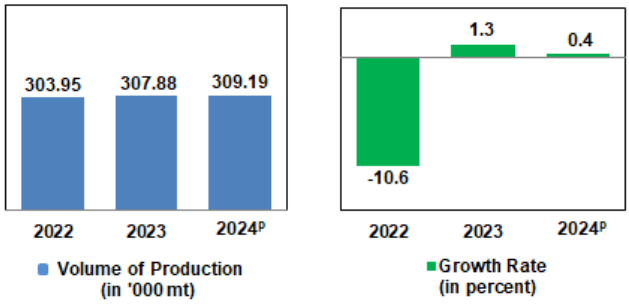
d. At the national level, the average farmgate price of milkfish in 2024 was quoted at PhP 124.71 per kilogram, representing a decrease of 3.4 percent from its previous year's average farmgate price of PhP 129.03 per kilogram. (Table 4)

2. Tilapia

a. In 2024, tilapia production was recorded at 309.19 thousand metric tons, reflecting an increase of 0.4 percent from the 307.88 thousand metric tons produced in 2023. (Figure 7 and Table 2)

b. Tilapia harvests contributed 7.6 percent to the total fisheries production from January to December 2024. (Table 2)

Figure 7. Volume and Annual Growth Rate of Tilapia Production, Philippines: January to December 2022 to 2024p



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

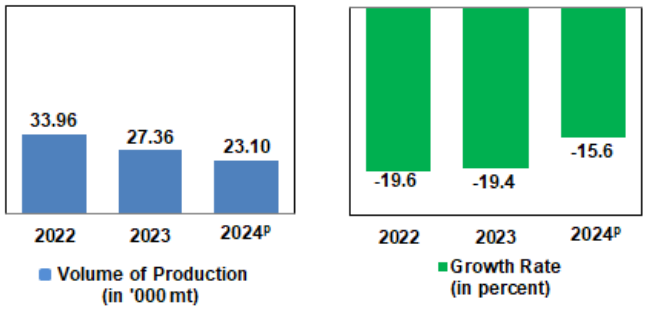
c. The estimated gross value of tilapia production at current prices in 2024 was PhP 29.71 billion, an improvement of 1.1 percent from its value of PhP 29.39 billion in 2023. (Table 3)

d. The national average farmgate price of tilapia from January to December 2024 was PhP 96.06 per kilogram. It indicates a 0.7 percent gain over the price quotation in 2023, which was at PhP 95.47 per kilogram. (Table 4)

3. Tiger prawn (Sugpo)

a. A total of 23.10 thousand metric tons of tiger prawn were produced during the year, which reflects a 15.6 percent decrease from its previous year's production of 27.36 thousand metric tons. (Figure 8 and Table 2)

Figure 8. Volume and Annual Growth Rate of Tiger Prawn Production, Philippines: January to December 2022 to 2024p



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

b. Tiger prawn caught this year contributed 0.6 percent to the total fisheries production in 2024. (Table 2)

c. The gross value of production for tiger prawn amounted to PhP 12.57 billion at current prices in 2024. It went down by 30.3 percent from the PhP 18.02 billion value in 2023. (Table 3)

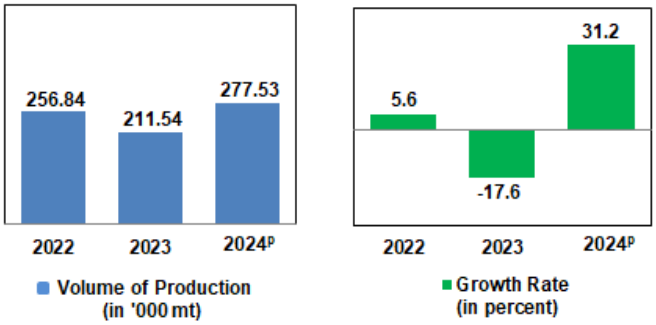
d. The average farmgate price of tiger prawn at the national level for 2024 was quoted at PhP 544.01 per kilogram. This indicates a decrease of 17.4 percent from the previous year's average farmgate price of PhP 658.65 per kilogram. (Table 4)

4. Skipjack (Gulyasan)

a. Skipjack production was registered at 277.53 thousand metric tons in 2024. This indicates an increase of 31.2 percent from the 2023 output of 211.54 thousand metric tons. (Figure 9 and Table 2)

b. Skipjack output accounted for 6.9 percent of the total fisheries production during the year. (Table 2)

Figure 9. Volume and Annual Growth Rate of Skipjack Production, Philippines: January to December 2022 to 2024p



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

c. At current prices, the gross value of skipjack production was recorded at PhP 25.19 billion during the period. It increased by 12.5 percent from its value of PhP 22.38 billion in 2023. (Table 3)

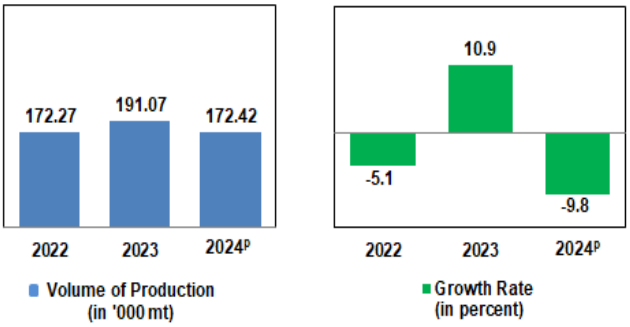
d. In 2024, the average farmgate price of skipjack was reported at PhP 90.76 per kilogram. It posted a decrement of 14.2 percent from the previous year's average farmgate price of PhP 105.81 per kilogram. (Table 4)

5. Roundscad (Galunggong)

a. A total of 172.42 thousand metric tons of roundscad production was recorded during the year. This was 9.8 percent lower than the production in 2023 at 191.07 thousand metric tons. (Figure 10 and Table 2)

b. Of the total fisheries production, 4.3 percent came from roundscad production during the year. (Table 2)

Figure 10. Volume and Annual Growth Rate of Roundscad Production, Philippines: January to December 2022 to 2024p



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

c. At current prices, the annual gross value of roundscad was posted at PhP 17.20 billion in 2024. This was 9.7 lower than its value of PhP 19.04 billion a year ago. (Table 3)

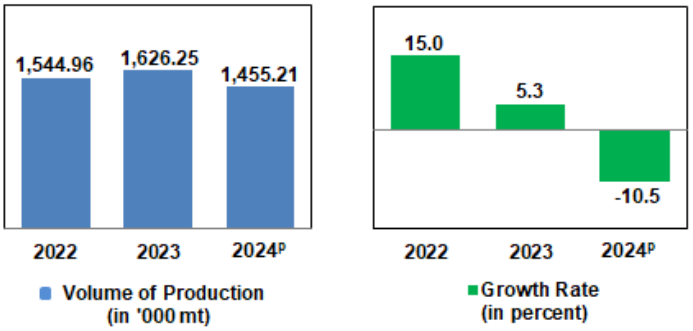
d. The average farmgate price of roundscad during the year was quoted at PhP 99.73 per kilogram. This posted an increase of 0.1 percent from its 2023 average farmgate price of PhP 99.64 per kilogram. (Table 4)

6. Seaweed

a. The production of seaweed from January to December 2024 was estimated at 1.46 million metric tons, reflecting a 10.5 percent decline from the 2023 output of 1.63 million metric tons. (Figure 11 and Table 2)

b. Total seaweed harvested in 2024 contributed 36.0 percent to the total volume of fisheries production. (Table 2)

Figure 11. Volume and Annual Growth Rate of Seaweed Production, Philippines: January to December 2022 to 2024p



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

c. The gross value of production at current prices for seaweed in 2024 amounted to PhP 10.48 billion. It registered a reduction of 17.6 percent from its value of PhP 12.71 billion in 2023. (Table 3)

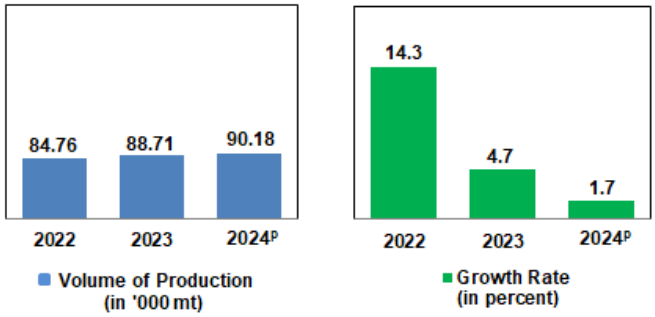
d. On the average, the farmgate price of seaweed at the national level during the year was quoted at PhP 7.20 per kilogram. It posted a 7.9 percent decrease from the previous year's average farmgate price of PhP 7.82 per kilogram. (Table 4)

7. Yellowfin tuna (Tambakol/Bariles)

a. The estimated production of yellowfin tuna in 2024 was 90.18 thousand metric tons, representing a 1.7 percent increase from the previous year's output of 88.71 thousand metric tons. (Figure 12 and Table 2)

b. In 2024, yellowfin tuna accounted for 2.2 percent of the total fisheries production. (Table 2)

Figure 12. Volume and Annual Growth Rate of Yellowfin Tuna Production, Philippines: January to December 2022 to 2024p



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

c. The gross value of yellowfin tuna production in 2024 was recorded at PhP 13.54 billion at current prices. It decreased by 5.2 percent from the PhP 14.28 billion earnings recorded in 2023. (Table 3)

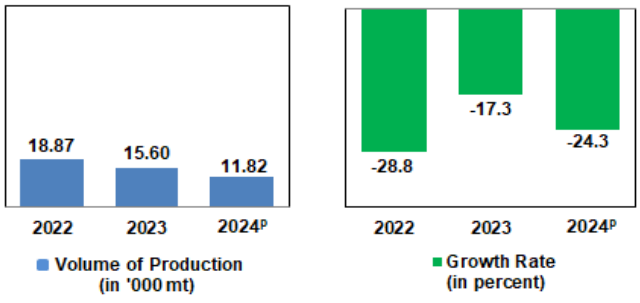
d. At the national level, the average farmgate price of yellowfin tuna during the year was PhP 150.10 per kilogram. This indicates a 6.7 percent decrease from the previous year's average farmgate price of PhP 160.93 per kilogram. (Table 4)

8. Mudcrab (Alimango)

a. Mudcrab production during the year was estimated at 11.82 thousand metric tons, which declined by 24.3 percent from the previous year's output of 15.60 thousand metric tons. (Figure 13 and Table 2)

b. Mudcrab output contributed 0.3 percent to the total fisheries production in 2024. (Table 2)

Figure 13. Volume and Annual Growth Rate of Mudcrab Production, Philippines: January to December 2022 to 2024p



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

c. The gross value of production for mudcrab in 2024 amounted to PhP 5.76 billion at current prices, reflecting a 25.9 percent decrease from the previous year's value of PhP 7.77 billion. (Table 3)

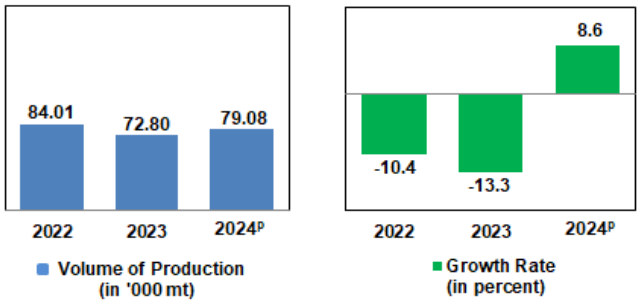
d. The average farmgate price of mudcrab in 2024 was PhP 487.05 per kilogram. This indicates a 2.2 percent decrease from the previous year's average farmgate price of PhP 497.81 per kilogram. (Table 4)

9. Frigate tuna (Tulingan)

a. Frigate tuna production was recorded at 79.08 thousand metric tons, which was 8.6 percent higher than the previous year's production of 72.80 thousand metric tons. (Figure 14 and Table 2)

b. In 2024, the production of frigate tuna contributed 2.0 percent to the total fisheries output. (Table 2)

Figure 14. Volume and Annual Growth Rate of Frigate Tuna Production, Philippines: January to December 2022 to 2024p



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

c. At current prices, the total earnings from the production of frigate tuna during the year was PhP 9.72 billion. This represents an increase of 3.8 percent from the previous year's earnings of PhP 9.36 billion. (Table 3)

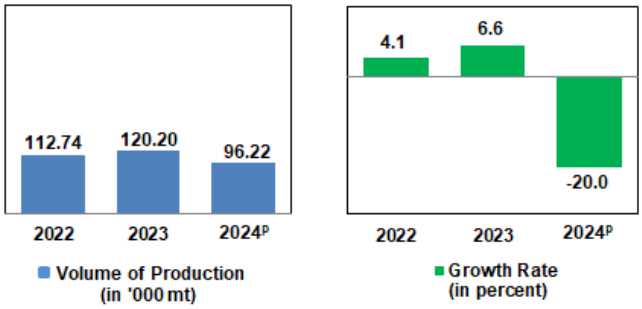
d. This year's average farmgate price of frigate tuna at the national level was quoted at PhP 122.88 per kilogram. This reflects a decrement of 4.4 percent from the average farmgate price of PhP 128.56 per kilogram in 2023. (Table 4)

10. Big-eyed scad (Matangbaka)

a. The big-eyed scad production during the year reached 96.22 thousand metric tons. It was reduced by 20.0 percent from its previous year's production of 120.20 thousand metric tons. (Figure 15 and Table 2)

b. The production of big-eyed scad in 2024 contributed 2.4 percent to the total fisheries production. (Table 2)

Figure 15. Volume and Annual Growth Rate of Big-eyed Scad Production, Philippines: January to December 2022 to 2024p



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

c. The 2024 gross value of big-eyed scad was PhP 11.93 billion at current prices. It diminished by 16.9 percent over the gross value of 14.37 billion in 2023. (Table 3)

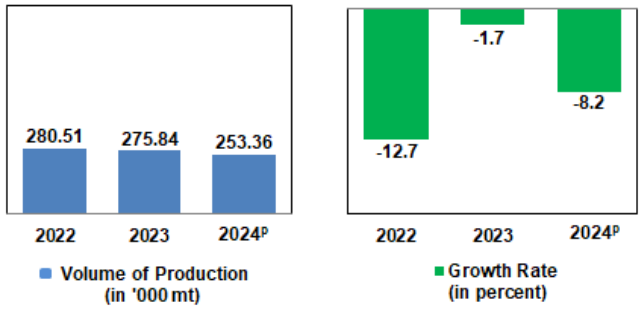
d. During the year, the average farmgate price of big-eyed scad at the national level was PhP 124.02, indicating an increase of 3.8 percent from the previous year's average farmgate price of PhP 119.51 per kilogram. (Table 4)

11. Bali sardinella (Tamban)

a. A total of 253.36 thousand metric tons of bali sardinella was caught during the year. This reflects a decrease of 8.2 percent from the 2023 production of 275.84 thousand metric tons. (Figure 16 and Table 2)

b. The volume of bali sardinella production accounted for 6.3 percent of the overall fisheries production during the period. (Table 2)

Figure 16. Volume and Annual Growth Rate of Bali Sardinella Production, Philippines: January to December 2022 to 2024p



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

c. The total value of bali sardinella production from January to December 2024 amounted to PhP 10.22 billion at current prices. It went down by 10.5 percent from the gross value in 2023 at PhP 11.41 billion. (Table 3)

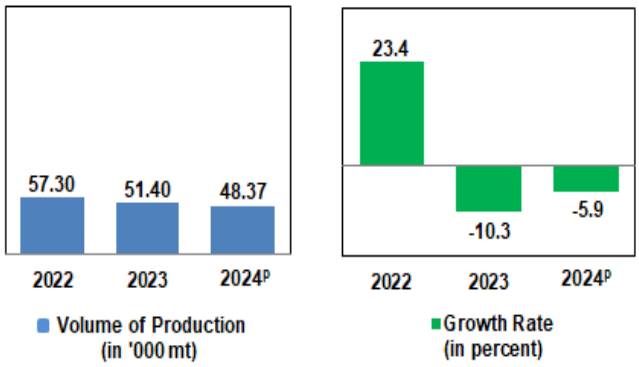
d. At the national level, the average farmgate price of bali sardinella was registered at PhP 40.32 per kilogram during the period. This was 2.5 percent lower than the previous year's average farmgate price of PhP 41.37 per kilogram. (Table 4)

12. Squid (Pusit)

a. During the year, squid production reached 48.37 thousand metric tons. It went down by 5.9 percent from the previous year's production of 51.40 thousand metric tons. (Figure 17 and Table 2)

b. Squid production in 2024 contributed 1.2 percent to the total fisheries production. (Table 2)

Figure 17. Volume and Annual Growth Rate of Squid Production, Philippines: January to December 2022 to 2024p



c. The gross value of squid during the year was PhP 7.81 billion at current prices. It decreased by 5.5 percent from the gross value of 8.27 billion in 2023. (Table 3)

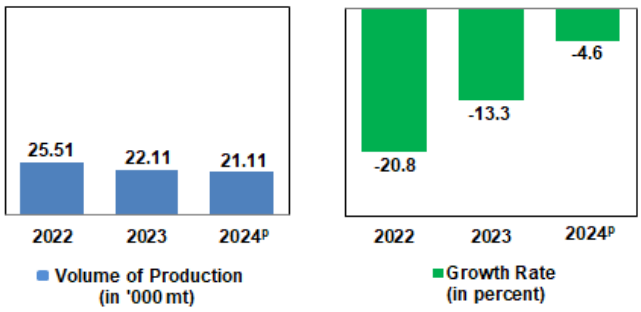
d. At the national level, the average farmgate price per kilogram of squid in 2024 was PhP 161.49 per kilogram, representing an increase of 0.4 percent from the previous year' average farmgate price of PhP 160.83 per kilogram. (Table 4)

13. Blue crab (Alimasag)

a. The blue crab production was estimated at 21.11 thousand metric tons during the year, reflecting a 4.6 percent decline from the previous year's output of 22.11 thousand metric tons. (Figure 18 and Table 2)

b. Blue crab production accounted for 0.5 percent of the total fisheries output during the year. (Table 2)

Figure 18. Volume and Annual Growth Rate of Blue Crab Production, Philippines: January to December 2022 to 2024p



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

c. The gross value of blue crab production in 2024 amounted to PhP 3.56 billion at current prices, representing a 9.3 percent decrease from the previous year's value of PhP 3.92 billion. (Table 3)

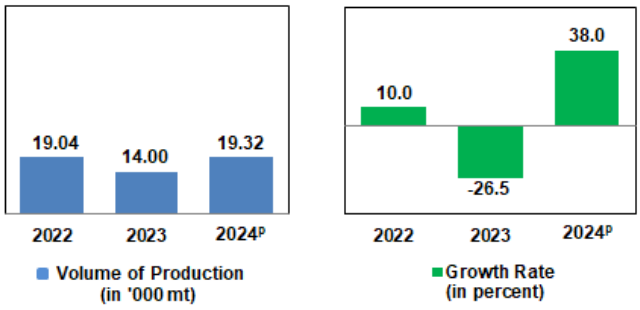
d. The average farmgate price of blue crab per kilogram was PhP 168.64 in 2024, representing a 4.9 percent reduction from its 2023 average farmgate price of PhP 177.36 per kilogram. (Table 4)

14. Bigeye tuna (Tambakol/Bariles)

a. In 2024, bigeye tuna production was recorded at 19.32 thousand metric tons. It increased by 38.0 percent from the previous year's output of 14.00 thousand metric tons. (Figure 19 and Table 2)

b. The production output of bigeye tuna contributed 0.5 percent to the total fisheries production in 2024. (Table 2)

Figure 19. Volume and Annual Growth Rate of Bigeye Tuna Production, Philippines: January to December 2022 to 2024p



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

c. The gross value of bigeye tuna production during the year amounted to PhP 3.59 billion at current prices. It increased by 49.8 percent from PhP 2.40 billion value in 2023. (Table 3)

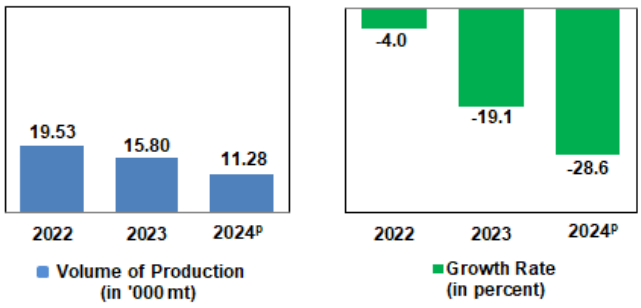
d. During the year, the average farmgate price of bigeye tuna was PhP 185.96 per kilogram. This shows an increment of 8.5 percent from its quotation of PhP 171.35 per kilogram in 2023. (Table 4)

15. Grouper (Lapu-lapu)

a. In 2024, the volume of grouper production was registered at 11.28 thousand metric tons. It indicates a reduction of 28.6 percent from the previous year's production of 15.80 thousand metric tons. (Figure 20 and Table 2)

b. Of the total fisheries output, grouper contributed 0.3 percent during the year. (Table 2)

Figure 20. Volume and Annual Growth Rate of Grouper Production, Philippines: January to December 2022 to 2024p



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

c. At current prices, grouper's value of production at the national level amounted to PhP 2.96 billion in 2024. This reflects a decrease of 25.0 percent from the PhP 3.95 billion value in 2023. (Table 3)

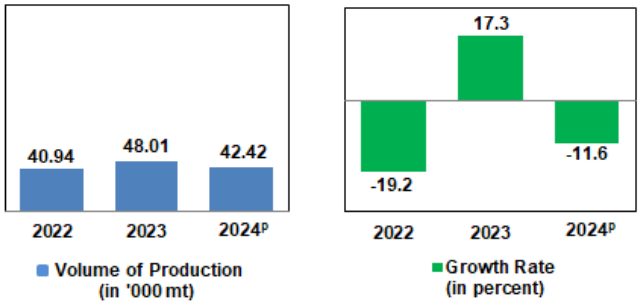
d. The average farmgate price of grouper in 2024 was quoted at PhP 262.79 per kilogram. This was 5.1 percent higher from the previous year's price quotation of PhP 250.13 per kilogram. (Table 4)

16. Indian mackerel (Alumahan)

a. Indian mackerel production reached 42.42 thousand metric tons in 2024. This indicates an annual drop of 11.6 percent from the 2023 production level of 48.01 thousand metric tons. (Figure 21 and Table 2)

b. Indian mackerel production contributed 1.0 percent to the total fisheries production during the year. (Table 2)

Figure 21. Volume and Annual Growth Rate of Indian Mackerel Production, Philippines: January to December 2022 to 2024p



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

c. From January to December 2024, indian mackerel's total value of production at current prices was recorded at PhP 5.12 billion, registering a decrease of 19.4 percent from the previous year's value of PhP 6.35 billion. (Table 3)

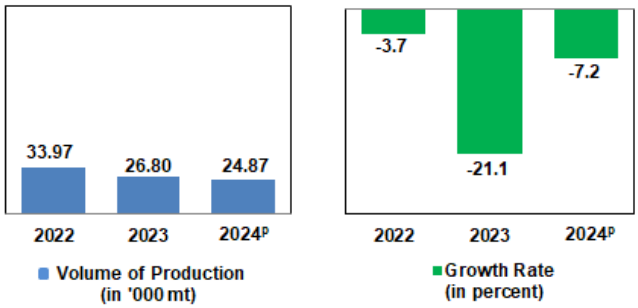
d. During the year, the average farmgate price of indian mackerel at the national level was noted at PhP 120.63 per kilogram. It went down by 8.8 percent from the 2023 average farmgate price of PhP 132.30 per kilogram. (Table 4)

17. Threadfin bream (Bisugo)

a. In 2024, a total of 24.87 thousand metric tons of threadfin bream was produced. It declined by 7.2 percent from the previous year's production of 26.80 thousand metric tons. (Figure 22 and Table 2)

b. Of the total fisheries production, about 0.6 percent was accounted to threadfin bream production. (Table 2)

Figure 22. Volume and Annual Growth Rate of Threadfin Bream Production, Philippines: January to December 2022 to 2024p



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

c. In 2024, the gross value of threadfin bream at current prices amounted to PhP 4.17 billion, which recorded a 10.1 percent decrease from its value of PhP 4.64 billion in 2023. (Table 3)

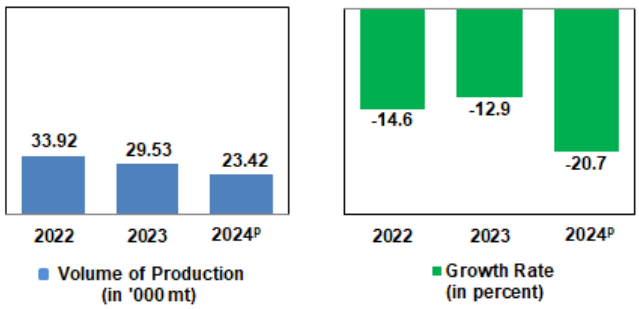
d. The average farmgate price of threadfin bream during the year was quoted at PhP 167.71 per kilogram. This was 3.1 percent lower than the previous year's price level of PhP 173.08 per kilogram. (Table 4)

18. Slipmouth (Sapsap)

a. Slipmouth production in 2024 was recorded at 23.42 thousand metric tons. This indicates a decrease of 20.7 percent from the 2023 level of 29.53 thousand metric tons. (Figure 23 and Table 2)

b. Of the total fisheries production in 2024, slipmouth output shared 0.6 percent. (Table 2)

Figure 23. Volume and Annual Growth Rate of Slipmouth Production, Philippines: January to December 2022 to 2024p



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

c. At current prices, the gross value of slipmouth production amounted to PhP 1.83 billion in 2024. This was 27.8 percent lower than the previous year's value of PhP 2.53 billion. (Table 3)

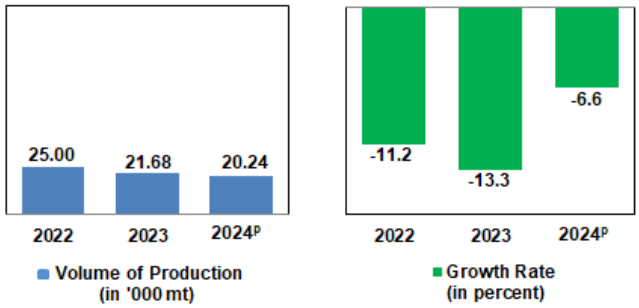
d. The average farmgate price of slipmouth during the period was registered at PhP 77.98 per kilogram. It went down by 9.0 percent from its 2023 average farmgate price of PhP 85.70 per kilogram. (Table 4)

19. Cavalla (Talakitok)

a. In 2024, cavalla production was recorded at 20.24 thousand metric tons, representing a 6.6 percent decrease from previous year's output of 21.68 thousand metric tons. (Figure 24 and Table 2)

b. Cavalla output contributed 0.5 percent to the total volume of fisheries production in 2024. (Table 2)

Figure 24. Volume and Annual Growth Rate of Cavalla Production, Philippines: January to December 2022 to 2024p



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

c. The gross value of cavalla production at current prices was PhP 2.80 billion in 2024, indicating a 20.4 percent decrease from the previous year's value of PhP 3.52 billion. (Table 3)

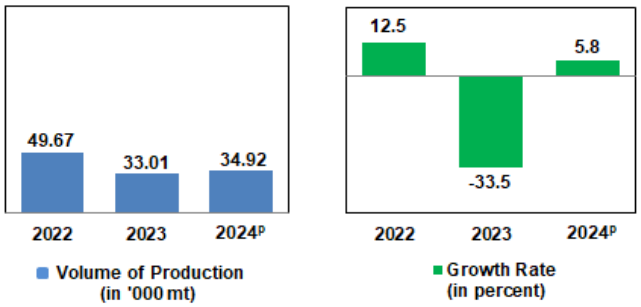
d. The national average farmgate price of cavalla was PhP 138.55 per kilogram. This was 14.7 percent lower than the previous year's average farmgate price of PhP 162.44 per kilogram. (Table 4)

20. Fimbriated sardines (Tunsoy)

a. In 2024, fimbriated sardines output was recorded at 34.92 thousand metric tons. This shows an increase of 5.8 percent from its 33.01 thousand metric tons output reported in 2023. (Figure 25 and Table 2)

b. Only 0.9 percent of the total fisheries production in 2024 came from the production of fimbriated sardines. (Table 2)

Figure 25. Volume and Annual Growth Rate of Fimbriated Sardines Production, Philippines: January to December 2022 to 2024p



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

c. The 2024 gross value of fimbriated sardines at current prices was PhP 1.77 billion, indicating a 10.6 percent decrease from the 2023 value of PhP 1.98 billion. (Table 3)

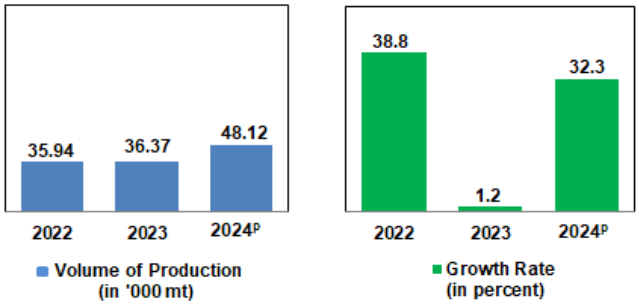
d. From January to December 2024, the fishermen received an average farmgate price PhP 50.80 per kilogram of fimbriated sardines at the national level. This shows a 15.5 percent reduction from the previous year's average farmgate price of PhP 60.13 per kilogram. (Table 4)

21. P. vannamei (Putian)

a. In 2024, a total of 48.12 thousand metric tons of P. vannamei was produced. This represents a 32.3 percent increase from its 36.37 thousand metric tons production in 2023. (Figure 26 and Table 2)

b. P. vannamei harvested this year contributed 1.2 percent to the total fisheries production. (Table 2)

Figure 26. Volume and Annual Growth Rate of P. vannamei Production, Philippines: January to December 2022 to 2024p



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

c. The gross value of P. vannamei production at current prices amounted to PhP 13.26 billion, which recorded a 26.6 percent increase from the PhP 10.47 billion value in 2023. (Table 3)

d. The average farmgate price of P. vannamei at the national level during the period was quoted at PhP 275.58 per kilogram. This was lower by 4.3 percent from its 2023 average farmgate price of PhP 287.91 per kilogram. (Table 4)

TECHNICAL NOTES

I. Introduction

The Fisheries Situation Report is released every quarter, which presents the data on the volume and value of production of fisheries during the reference quarter. This 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 21 major species highlighted in this report were identified based on their value of production at constant 2018 prices.

II. Data Collection

A. Surveys

1. 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. 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. 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. 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 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 Provincial Statistical Office (PSO) staff and/or SR gather data from administrative records of non-traditional landing centers such as those that are managed by the PFDA, 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. 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 (NCR), the region is the domain.

4. Estimation Procedure

   a. Weight

      Primary Sampling Unit (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

Secondary Sampling Unit (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*

Adjustment Factor 3

To take into account the status of landing centers during the survey for each month, the adjustment factor is obtained as follows:

$$A_m = \frac{\sum_{i=1}^{n\ l} E_i}{\sum_{i=1}^{n\ l} R_i}$$

where:

A_m – adjustment factor for status of landing centers in month *m*

E_i – eligibility status of landing center *i* in month *m* (1 if eligible, 0 otherwise)

R_i – responding status of landing center i in month m (1 if responding, 0 otherwise)

Final Weight

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

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

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*

A_m - adjustment factor for landing centers which closed during the survey in 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:

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

where:

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

$\widehat{Y'}p$ - 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

e. Estimation of Variance and Standard Error

Variance

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

$$V(\hat{Y}_p) = \left(1 - \frac{a}{A}\right) a s_1^2 + \frac{a}{A} \sum_{i=1}^{a} \left(1 - \frac{n_i}{N_i}\right) n_i s_{2i}^2$$

where:

$$s_1^2 = \frac{\sum_{i=1}^{a} (y_i - \bar{y})^2}{a - 1}$$

$$s_{2i}^2 = \frac{\sum_{j=1}^{n_i} (y_{ij} - \bar{y}_i)^2}{n_i - 1}$$

$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province
s_1^2 - sample variance between PSUs in the province
s_{2i}^2 - sample variance of SSUs within PSUs in the province
a - number of sample landing centers in the province
A - total number of landing centers in the province
n_i - number of sample commercial boats for landing center *i*
N_i - total number of commercial boats for landing center *i*
y_i - estimated production for the landing center *i*
y_{ij} - estimated production for operator *j* in landing center *i*
$\bar{y}$ - mean production of the province
$\bar{y}_i$ - mean production for landing center *i*

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

$$V(\hat{Y}_r) = \sum_{p=1}^{n_p} V(\hat{Y}_p)$$

where:

$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region
$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province
n_p - total number of provinces in the region

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

$$V(\hat{Y}_n) = \sum_{r=1}^{n_r} V(\hat{Y}_r)$$

where:

$V(\hat{Y}_n)$ - variance of the estimated total volume of fish production at the national level

$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region

n_r - total number of regions with commercial landing centers

Standard Error

The standard error for the provincial total volume of production is obtained using the following formula:

$$se(\hat{Y}_p) = \sqrt{V(\hat{Y}_p)}$$

where:

$se(\hat{Y}_p)$ - standard error of the estimated total volume of fish production for the province

$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province

The standard error for the regional total volume of production is obtained using the following formula:

$$se(\hat{Y}_r) = \sqrt{V(\hat{Y}_r)}$$

where:

$se(\hat{Y}_r)$ - standard error of the estimated total volume of fish production for the region

$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region

The standard error for the national total volume of production is obtained using the following formula:

$$se(\hat{Y}_n) = \sqrt{V(\hat{Y}_n)}$$

where:

$se(\hat{Y}_n)$ - standard error of the estimated total volume of fish production at the national level

$V(\hat{Y}_n)$ - variance of the estimated total volume of fish production at the national level

B. 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 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 PSU and the boats unloaded as the SSU. The 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 NCR, the region is the domain.

4. Estimation Procedure

a. Weights

<u>PSU Weight</u>

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*

Adjustment Factor 3

To take into account the status of landing centers during the survey for each month, the adjustment factor is obtained as follows:

$$A_m = \frac{\sum_{i=1}^{n\ l} E_i}{\sum_{i=1}^{n\ l} R_i}$$

where:

A_m – adjustment factor for status of landing centers in month *m*

E_i – eligibility status of landing center *i* in month *m* (1 if eligible, 0 otherwise)

R_i – responding status of landing center i in month m (1 if responding, 0 otherwise)

Final Weight

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

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

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*

A_m - adjustment factor for landing centers which closed during the survey in 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:

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

$\widehat{Y'}p$ - 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

e. Estimation of Variance and Standard Error

Variance

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

$$V(\hat{Y}_p) = \sum_{h=1}^{3} V(\hat{Y}_h)$$

where:

$$V(\hat{Y}_h) = \left(1 - \frac{a_h}{A_h}\right) a_h s_h^2 + \frac{a_h}{A_h} \sum_{i=1}^{a_h} \left(1 - \frac{n_{hi}}{N_{hi}}\right) n_{hi} s_{hi}^2$$

$$s_h^2 = \frac{\sum_{i=1}^{a_h} (y_{hi} - \bar{y}_h)^2}{a_h - 1}$$

$$s_{hi}^2 = \frac{\sum_{j=1}^{n_{hi}} (y_{hij} - \bar{y}_{hi})^2}{n_{hi} - 1}$$

$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province

s_h^2 - sample variance between PSUs on the stratum *h*

s_{hi}^2 - sample variance within PSUs on the stratum *h*

a - number of sample landing centers in the province

A - total number of landing centers in the province

n_i - number of sample municipal boats for landing center *i*
N_{hi} - total number of municipal boats for landing center *i*
y_i - estimated production for the landing center *i*
y_{ij} - estimated production for operator *j* in landing center *i*
$\bar{y}$ - average production of the province
$\bar{y}_i$ - average production for landing center *i*

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

$$V(\hat{Y}_r) = \sum_{p=1}^{n_p} V(\hat{Y}_p)$$

where:
$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region
$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province
n_p - total number of provinces in the region

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

$$V(\hat{Y}_n) = \sum_{r=1}^{n_r} V(\hat{Y}_r)$$

where:
$V(\hat{Y}_n)$ - variance of the estimated total volume of fish production at the national level
$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region
n_r - total number of regions with municipal landing centers

Standard Error

The standard error for the provincial total volume of production is obtained using the following formula:

$$se(\hat{Y}_p) = \sqrt{V(\hat{Y}_p)}$$

where:

$se(\hat{Y}_p)$ - standard error of the estimated total volume of fish production for the province

$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province

The standard error for the regional total volume of production is obtained using the following formula:

$$se(\hat{Y}_r) = \sqrt{V(\hat{Y}_r)}$$

where:

$se(\hat{Y}_r)$ - standard error of the estimated total volume of fish production for the region

$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region

The standard error for the national total volume of production is obtained using the following formula:

$$se(\hat{Y}_n) = \sqrt{V(\hat{Y}_n)}$$

where:

$se(\hat{Y}_n)$ - standard error of the estimated total volume of fish production at the national level

$V(\hat{Y}_n)$ - variance of the estimated total volume of fish production at the national level

C. QIFS

1. Sampling Frame

The QIFS uses the 2012 Census of Agriculture and Fisheries 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 PSU and inland fishing household as the SSU.

Sample barangays are selected using PPS with sampling rate of 10.0 percent. The number of inland fishing households is used as the size measure. Sample inland fishing households 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 NCR, 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

c. Estimation of Variance and Standard Error

Variance

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

$$V(\hat{Y}_p) = \left(1 - \frac{a}{A}\right) a s_1^2 + \frac{a}{A} \sum_{i=1}^{a} \left(1 - \frac{n_i}{N_i}\right) n_i s_{2i}^2$$

where:

$$s_1^2 = \frac{\sum_{i=1}^{a} (y_i - \bar{y})^2}{a - 1}$$

$$s_{2i}^2 = \frac{\sum_{j=1}^{n_i} (y_{ij} - \bar{y}_i)^2}{n_i - 1}$$

$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province

s_1^2 - sample variance between PSUs

s_{2i}^2 - sample variance within PSUs on stratum

a - number of sample inland fishing barangays in the province

A - total number of inland fishing barangays in the province

n_i - number of sample inland fishing households in barangay *i*

N_{hi} - total number of inland fishing households in barangay *i*

y_i - estimated production for inland fishing households in barangay *i*

y_{ij} - estimated production for inland fishing household *j* in barangay *i*

$\bar{y}$ - mean production of the province

$\bar{y}_i$ - mean production for barangay *i*

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

$$V(\hat{Y}_r) = \sum_{p=1}^{n_p} V(\hat{Y}_p)$$

where:

$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region

$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province

n_p - total number of provinces in the region

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

$$V(\hat{Y}_n) = \sum_{r=1}^{n_r} V(\hat{Y}_r)$$

where:

$V(\hat{Y}_n)$ - variance of the estimated total volume of fish production at the national level

$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region

n_r - total number of regions with inland fishing households

Standard Error

The standard error for the provincial total volume of production is obtained using the following formula:

$$se(\hat{Y}_p) = \sqrt{V(\hat{Y}_p)}$$

where:

$se(\hat{Y}_p)$ - standard error of the estimated total volume of fish production for the province

$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province

The standard error for the regional total volume of production is obtained using the following formula:

$$se(\hat{Y}_r) = \sqrt{V(\hat{Y}_r)}$$

where:

$se(\hat{Y}_r)$ - standard error of the estimated total volume of fish production for the region

$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region

The standard error for the national total volume of production is obtained using the following formula:

$$se(\hat{Y}_n) = \sqrt{V(\hat{Y}_n)}$$

where:

$se(\hat{Y}_n)$ - standard error of the estimated total volume of fish production at the national level

$V(\hat{Y}_n)$ - variance of the estimated total volume of fish production at the national level

D. 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.

2. Sample Selection Procedure

The sample selection for QAqS utilizes 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 NCR, 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

c. Estimation of Variance and Standard Error

Variance

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

$$V(\hat{Y}_p) = \left(1 - \frac{a}{A}\right) as^2$$

where:

$$s^2 = \frac{\sum_{i=1}^{a}(y_i - \bar{y})^2}{a - 1}$$

$$z_i = w_i y_i$$

$V(\hat{Y}_p)$ - variance of the estimated total aquaculture production for the province

s^2 - sample variance between the aquafarms in the province

y_i - weighted average aquaculture production of aquafarm *i* in the province

$\bar{y}$ - weighted average aquaculture production in the province

a - number of sample aquafarms in the province

A - total number of aquafarms in the province

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

$$V(\hat{Y}_r) = \sum_{p=1}^{n_p} V(\hat{Y}_p)$$

where:

$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region

$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province

n_p - total number of provinces in the region

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

$$V(\hat{Y}_n) = \sum_{r=1}^{n_r} V(\hat{Y}_r)$$

where:

$V(\hat{Y}_n)$ - variance of the estimated total volume of fish production at the national level

$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region

n_r - total number of regions with aquafarms

Standard Error

The standard error for the provincial total volume of production is obtained using the following formula:

$$se(\hat{Y}_p) = \sqrt{V(\hat{Y}_p)}$$

where:

$se(\hat{Y}_p)$ - standard error of the estimated total volume of fish production for the province

$V(\hat{Y}_p)$ - variance of the estimated total volume of fish production for the province

The standard error for the regional total volume of production is obtained using the following formula:

$$se(\hat{Y}_r) = \sqrt{V(\hat{Y}_r)}$$

where:

$se(\hat{Y}_r)$ - standard error of the estimated total volume of fish production for the region

$V(\hat{Y}_r)$ - variance of the estimated total volume of fish production for the region

The standard error for the national total volume of production is obtained using the following formula:

$$se(\hat{Y}_n) = \sqrt{V(\hat{Y}_n)}$$

where:

$se(\hat{Y}_n)$ - standard error of the estimated total volume of fish production at the national level

$V(\hat{Y}_n)$ - variance of the estimated total volume of fish production at the national level

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 2024 is released quarterly in the PSA Website with the following schedule:

Reference Quarter	Schedule of Release	
	Estimates for OpenStat	Fisheries Situation Report
Quarter 4 2024 and Annual	28 January 2025	28 January 2025
Quarter 1 2025	07 May 2025	07 May 2025
Quarter 2 2025	06 August 2025	06 August 2025
Quarter 3 2025	05 November 2025	05 November 2025

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

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VII. Contact Information

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Table 1. Volume of Fisheries Production by Subsector: Philippines
January to December 2022 – 2024[P]

Subsector	Volume of Production (metric tons)			Percent Change (%)		Percent Share to Total Volume of Fisheries Production (%)
	2022	2023	2024[P]	2023/2022	2024[P]/2023	2024
Fisheries	4,338,198.60	4,260,993.59	4,047,276.62	-1.8	-5.0	100.0
Commercial Fisheries	862,686.33	822,427.47	857,329.70	-4.7	4.2	21.2
Municipal Fisheries	1,126,260.25	1,054,542.74	968,939.57	-6.4	-8.1	23.9
Marine	950,908.69	879,961.58	802,769.29	-7.5	-8.8	19.8
Inland	175,351.56	174,581.16	166,170.28	-0.4	-4.8	4.1
Aquaculture	2,349,252.01	2,384,023.39	2,221,007.34	1.5	-6.8	54.9

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
January to December 2022 – 2024[P]

Species	Volume of Production (metric tons)			Percent Change (%)		Percent Point Contribution (%)	Percent Share to Total Volume of Fisheries Production (%)
	2022	2023	2024[P]	2023/2022	2024[P]/2023	2024	2024
Fisheries	4,338,198.60	4,260,993.59	4,047,276.62	-1.8	-5.0	-5.0	100.0
Milkfish (Bangus)	390,098.30	355,425.87	361,241.77	-8.9	1.6	0.1	8.9
Tilapia	303,953.10	307,878.28	309,194.81	1.3	0.4	a/	7.6
Tiger prawn (Sugpo)	33,960.06	27,362.52	23,098.43	-19.4	-15.6	-0.1	0.6
Skipjack (Gulyasan)	256,837.26	211,536.91	277,525.34	-17.6	31.2	1.6	6.9
Roundscad (Galunggong)	172,266.77	191,073.77	172,417.04	10.9	-9.8	-0.4	4.3
Seaweed	1,544,959.87	1,626,245.11	1,455,207.16	5.3	-10.5	-4.0	36.0
Yellowfin tuna (Tambakol/Bariles)	84,755.06	88,706.56	90,181.17	4.7	1.7	a/	2.2
Mudcrab (Alimango)	18,870.28	15,603.77	11,817.85	-17.3	-24.3	-0.1	0.3
Frigate tuna (Tulingan)	84,014.07	72,803.98	79,083.91	-13.3	8.6	0.1	2.0
Big-eyed scad (Matangbaka)	112,743.90	120,204.91	96,223.93	6.6	-20.0	-0.6	2.4
Bali sardinella (Tamban)	280,508.70	275,843.88	253,356.60	-1.7	-8.2	-0.5	6.3
Squid (Pusit)	57,302.61	51,404.78	48,370.27	-10.3	-5.9	-0.1	1.2
Blue crab (Alimasag)	25,508.34	22,112.63	21,105.27	-13.3	-4.6	a/	0.5
Bigeye tuna (Tambakol/Bariles)	19,039.62	13,998.06	19,317.77	-26.5	38.0	0.1	0.5
Grouper (Lapu-lapu)	19,530.13	15,800.36	11,275.77	-19.1	-28.6	-0.1	0.3
Indian mackerel (Alumahan)	40,937.82	48,010.27	42,421.03	17.3	-11.6	-0.1	1.0
Threadfin bream (Bisugo)	33,973.38	26,803.28	24,870.31	-21.1	-7.2	a/	0.6
Slipmouth (Sapsap)	33,920.46	29,530.85	23,420.68	-12.9	-20.7	-0.1	0.6
Cavalla (Talakitok)	25,003.75	21,681.28	20,241.26	-13.3	-6.6	a/	0.5
Fimbriated sardines (Tunsoy)	49,674.89	33,012.02	34,922.51	-33.5	5.8	a/	0.9
P. Vannamei (Putian)	35,942.73	36,370.88	48,115.37	1.2	32.3	0.3	1.2
Others	714,397.50	669,583.64	623,868.36	-6.3	-6.8	-1.1	15.4

p - Preliminary
a/ – less than 0.1 percent
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
January to December 2022 – 2024[P]

Species	Value of Production at Current Prices ('000 PhP)			Percent Change (%)		Percent Share to Total Volume of Fisheries Production (%)
	2022	2023	2024[P]	2023/2022	2024[P]/2023	2024
Fisheries	326,745,195.72	328,740,522.69	304,581,746.26	0.6	-7.4	100.0
Milkfish (Bangus)	46,586,951.05	45,859,221.39	45,051,276.76	-1.6	-1.8	14.8
Tilapia	25,965,935.61	29,393,853.81	29,710,134.39	13.2	1.1	9.8
Tiger prawn (Sugpo)	17,793,095.73	18,022,319.08	12,565,684.26	1.3	-30.3	4.1
Skipjack (Gulyasan)	24,966,683.59	22,382,539.38	25,186,959.68	-10.4	12.5	8.3
Roundscad (Galunggong)	16,935,255.32	19,038,780.47	17,195,599.85	12.4	-9.7	5.6
Seaweed	16,600,706.42	12,714,307.79	10,476,594.73	-23.4	-17.6	3.4
Yellowfin tuna (Tambakol/Bariles)	13,800,407.12	14,275,582.93	13,536,204.25	3.4	-5.2	4.4
Mudcrab (Alimango)	8,032,815.75	7,767,651.79	5,755,917.58	-3.3	-25.9	1.9
Frigate tuna (Tulingan)	9,539,186.58	9,359,982.19	9,717,497.38	-1.9	3.8	3.2
Big-eyed scad (Matangbaka)	12,656,792.48	14,365,724.41	11,933,572.31	13.5	-16.9	3.9
Bali sardinella (Tamban)	9,838,648.52	11,411,273.70	10,215,272.68	16.0	-10.5	3.4
Squid (Pusit)	8,612,512.04	8,267,605.10	7,811,239.32	-4.0	-5.5	2.6
Blue crab (Alimasag)	4,685,503.54	3,921,883.16	3,559,188.90	-16.3	-9.3	1.2
Bigeye tuna (Tambakol/Bariles)	3,249,267.92	2,398,565.43	3,592,349.53	-26.2	49.8	1.2
Grouper (Lapu-lapu)	4,196,351.41	3,952,147.11	2,963,169.20	-5.8	-25.0	1.0
Indian mackerel (Alumahan)	5,062,297.27	6,351,556.21	5,117,287.10	25.5	-19.4	1.7
Threadfin bream (Bisugo)	5,373,538.05	4,639,194.39	4,170,979.20	-13.7	-10.1	1.4
Slipmouth (Sapsap)	2,939,228.20	2,530,893.19	1,826,434.06	-13.9	-27.8	0.6
Cavalla (Talakitok)	3,816,093.06	3,521,802.07	2,804,397.26	-7.7	-20.4	0.9
Fimbriated sardines (Tunsoy)	2,514,000.52	1,984,883.38	1,773,948.59	-21.1	-10.6	0.6
P. Vannamei	9,783,903.85	10,471,499.62	13,259,748.89	7.0	26.6	4.4
Others	73,796,021.69	76,109,256.09	66,358,290.34	3.1	-12.8	21.8

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 4. Average Farmgate Price by Species: Philippines, January to December 2022 – 2024P

Species	Average Price (PhP/Kg)			Percent Change (%)	
	2022	2023	2024P	2023/2022	2024P/2023
Fisheries					
Milkfish (Bangus)	119.42	129.03	124.71	8.1	-3.4
Tilapia	85.43	95.47	96.09	11.8	0.7
Tiger prawn (Sugpo)	523.94	658.65	544.01	25.7	-17.4
Skipjack (Gulyasan)	97.21	105.81	90.76	8.9	-14.2
Roundscad (Galunggong)	98.31	99.64	99.73	1.4	0.1
Seaweed	10.75	7.82	7.20	-27.3	-7.9
Yellowfin tuna (Tambakol/Bariles)	162.83	160.93	150.10	-1.2	-6.7
Mudcrab (Alimango)	425.69	497.81	487.05	16.9	-2.2
Frigate tuna (Tulingan)	113.54	128.56	122.88	13.2	-4.4
Big-eyed scad (Matangbaka)	112.26	119.51	124.02	6.5	3.8
Bali sardinella (Tamban)	35.07	41.37	40.32	18.0	-2.5
Squid (Pusit)	150.30	160.83	161.49	7.0	0.4
Blue crab (Alimasag)	183.69	177.36	168.64	-3.5	-4.9
Bigeye tuna (Tambakol/ Bariles)	170.66	171.35	185.96	0.4	8.5
Grouper (Lapu-lapu)	214.87	250.13	262.79	16.4	5.1
Indian mackerel (Alumahan)	123.66	132.30	120.63	7.0	-8.8
Threadfin bream (Bisugo)	158.17	173.08	167.71	9.4	-3.1
Slipmouth (Sapsap)	86.65	85.70	77.98	-1.1	-9.0
Cavalla (Talakitok)	152.62	162.44	138.55	6.4	-14.7
Fimbriated sardines (Tunsoy)	50.61	60.13	50.80	18.8	-15.5
P. Vannamei	272.21	287.91	275.58	5.8	-4.3
Others	103.30	113.67	106.37	10.0	-6.4

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

Table 5. Volume of Fisheries Production with Measure of Precision by Subsector: Philippines, January to December 2022 – 2024[P]

Subsector	Volume of Production (metric tons)	Standard Error (SE)	CV (%)	95% Confidence Interval
Fisheries	4,047,276.62	53,860.00	1.60	(3,941,711.02 , 4,152,842.21)
Commercial Fisheries	857,329.70	5,450.61	2.25	(846,646.51 , 868,012.89)
Municipal Fisheries	968,939.57	23,676.81	2.61	(922,533.02 , 1,015,346.12)
Marine	802,769.29	22,504.46	3.04	(758,660.55 , 846,878.03)
Inland	166,170.28	4,165.63	2.51	(158,005.64 , 174,334.92)
Aquaculture	2,221,007.34	39,155.03	1.76	(2,144,263.48 , 2,297,751.21)

p - Preliminary
Note: Standard Error (SE) and Coefficient of Variation (CV) are based on the survey results only.
Sources: Philippine Statistics Authority, Quarterly Commercial Fisheries Survey, Quarterly Municipal Fisheries Survey, Quarterly Inland Fisheries Survey, and Quarterly Aquaculture Survey

PSA

Fisheries Situation Report

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