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Agricultural Indicators System

2017-2021

Output and Productivity

The **Agricultural Indicators System (AIS)**
is an annual publication prepared by the Agricultural Accounts Division of the
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FOREWORD

The Agricultural Indicators System (AIS) is one of the statistical indicator frameworks maintained by the Philippine Statistics Authority (PSA). It contains eight modules which are updated and released annually. These modular reports provide measures for assessing socio-economic changes in the agriculture sector, characterizing the agrarian structure of the economy, and situating agriculture in the national economy.

This is the third module entitled Output and Productivity. This module provides information on productivity of the different components of the agricultural sector such as crops, livestock and poultry, and fisheries. The reference years are 2017 to 2021.

The AIS aims to cover more agricultural development indicators to support the information needs of our data users. We encourage the readers to give their comments and suggestions on the improvement of the AIS, in general, and this report, in particular.

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Date: 2022.07.29 19:32:14 +08'00'

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29 July 2022

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TECHNICAL NOTES

1. The report highlights a five-year data on the productivity of the different components of agricultural sector such as crops, livestock and poultry, and fisheries production.

2. The basic data such as the area planted/harvested, production and yield of crops, volume of livestock and poultry production, and volume of fisheries production by species and by subsector are sourced from the crops, livestock and poultry, and fishery surveys of the Philippine Statistics Authority.

3. Concepts and Definitions

   Crop Production – refers to the quantity produced and actually harvested for a particular crop during the reference period. It includes those harvested but damaged, stolen, given away, consumed, given as harvester's share, reserved, etc. Excluded are those produced but not harvested due to low price, lack of demand and force majeure or fortuitous events, etc.

   Area Harvested – refers to actual area from which harvests are realized. This excludes crop area which is totally damaged. It may be smaller than the area planted. In crops statistics, this applies to temporary crops.

   Area Planted – refers to actual physical area planted. This generally applies to area reported for permanent crops and multi-harvest temporary crops.

   Yield – refers to the average production per unit area. It is an indicator of productivity derived by dividing total production by the area harvested.

   Indices of Area Harvested for Agricultural Crops – these indicators measure the percent change in area harvested relative to a given base year. These show the differential changes among the different crops which could reflect the shifts in the utilization of the country's arable land.

$$Indices\ of\ Area\ Harvested = \frac{Area\ Harvested\ in\ a\ Given\ Year}{Area\ Harvested\ in\ the\ Base\ Year} \times\ 100\%$$

   Growth Rate of Area Harvested for Agricultural Crops – denotes year-on-year variation or annual percentage change in area harvested for agricultural crops.

$$\begin{matrix} Growth\ Rate \\ of\ Area\ Harvested \end{matrix} = \frac{Area\ Harvested\ in\ the\ Current\ Year}{Area\ Harvested\ in\ the\ Previous\ Year} - 1\ \times 100\%$$

Indices of Production for Agricultural Crops – measure the relative changes in production of different crops in a given year compared to a base year. The production index reflects the relative pace of production changes among these agricultural commodities.

$$Indices\ of\ Production\ = \frac{Production\ in\ a\ Given\ Year}{Production\ in\ the\ Base\ Year} \times 100\%$$

Growth Rate of Production for Agricultural Crops – denotes the yearly changes in production.

$$\begin{matrix} Growth\ Rate \\ of\ Production \end{matrix} = \frac{Production\ in\ the\ Current\ Year}{Production\ in\ the\ Previous\ Year} - 1\ \times 100\%$$

Indices of Yield for Agricultural Crops – reflect the changes in production per hectare of agricultural crops in specific year compared to a base year.

$$Indices\ of\ Yield\ = \frac{Yield\ in\ a\ Given\ Year}{Yield\ in\ the\ Base\ Year} \times 100\%$$

Growth Rate of Yield for Agricultural Crops – provides a measure of the annual change in agricultural productivity. A positive change indicates improvement in productivity, while a negative growth reflects deterioration in productivity.

$$Growth\ Rate\ of\ Yield = \frac{Yield\ in\ the\ Current\ Year}{Yield\ in\ the\ Previous\ Year} - 1\ \times 100\%$$

Livestock and Poultry Production - refers to the volume of indigenous (locally-raised) animals disposed for slaughter plus animals exported or shipped-out for slaughter both in liveweight equivalent.

Milk Production – amount of milk produced by dairy animals including suckled or fed to calving to the dry period.

Indices of Volume for Livestock and Poultry Production – reflect the changes in the volume of production of livestock and poultry in a given year relative to a base year.

$$\begin{matrix} Indices\ of\ Volume\ for \\ Livestock\ and\ Poultry\ Production \end{matrix} = \frac{Production\ in\ a\ Given\ Year}{Production\ in\ the\ Base\ Year} \times 100\%$$

Growth Rate of Volume for Livestock and Poultry Production – measures the annual rate of growth of production of each component of the livestock and poultry sector.

$$\begin{matrix} Growth\ Rate \\ of\ Production \end{matrix} = \frac{Production\ in\ the\ Current\ Year}{Production\ in\ the\ Previous\ Year} - 1\ \times 100\%$$

Volume of Fisheries Production – a.) Commercial Fisheries – quantity of fish catch unloaded in the commercial fish landing centers; b.) Marine Municipal Fisheries – quantity of fish catch unloaded in the municipal fish landing centers; c.) Inland Municipal Fisheries – quantity of species caught by inland fishing households; d.) Aquaculture – quantity of species harvested in the aquafarms.

Indices of Volume for Fisheries Production – measure the changes in the volume of fisheries production by subsector and species in a given year relative to a base year.

$$Indices\ of\ Volume\ for\ Fisheries\ Production = \frac{Production\ in\ a\ Given\ Year}{Production\ in\ the\ Base\ Year} \times 100\%$$

Growth Rate of Volume for Fisheries Production – measures the year-on- year variation in the volume of fisheries production by subsector and species.

$$Growth\ Rate\ of\ Production = \frac{Production\ in\ the\ Current\ Year}{Production\ in\ the\ Previous\ Year} - 1 \times 100\%$$

$$Annual\ Average\ Growth\ Rate = \frac{\sum GR_i}{4}, where\ i = 2018, 2019, \ldots, 2021$$

Commercial Fisheries – is one of the fisheries subsectors that covers fishing operations in marine waters beyond 15 kilometers from the shoreline by fishing boats with more than three (3) gross tons.

Municipal Fisheries – is one of the fisheries subsectors that covers fishing operations in marine waters beyond 15 kilometers from the shoreline using fishing vessels of three (3) gross tons or less, or fishing not requiring the use of fishing vessels.

Inland Fisheries – is one of the fisheries subsectors that covers fishing operations performed in inland bodies of water using fishing vessels of three (3) gross tons or less or fishing not requiring the use of fishing vessels.

Aquaculture – fishery operations involving all forms of raising and culturing of fish and other fishery species in fresh, brackish and marine water areas.

Fishpond – refers to a land-based type of aquafarm; a body of water (artificial or natural) where fish and other aquatic products are cultured, raised, or cultivated under controlled conditions.

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

Fish Cage – a stationary or floating fish enclosure 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.

Oyster/Mussel Farm – an aquafarm involved in the cultivation of oyster/mussel in shallow brackish or marine areas by any method for production purposes.

Seaweed Farm – an aquafarm involved in the cultivation of seaweed in suitable water areas by any method with appropriate intensive care for production in commercial quantities.

Brackish Water Environment – refers to mixed seawater and freshwater and salinity varies with the tide. Examples are estuaries, mangroves, and mouth of rivers where seawater enters during high tide.

Freshwater Environment – refers to water without salt or marine origin. It is pure fresh water. Examples of no mixture of seawater (Laguna de Bay, Taal Lake, Candaba Swamps, Liguasan Marsh and rivers, canals, dams and paddy fields and rice fields.

Marine Water/Seawater Environment – refers to inshore and open waters and inland seas in which salinity generally exceeds 20 percent.

Output and Productivity

Crops

The performance of the crops industry can be monitored by looking at the changes in area, production, and yield through the use of indices and growth rates. Indices of area harvested can indicate the probable shift in the utilization of the country's arable land. Production indices measure the changes in the volume of crop production, while yield indices indicate the productivity changes through the years compared to a given base year.

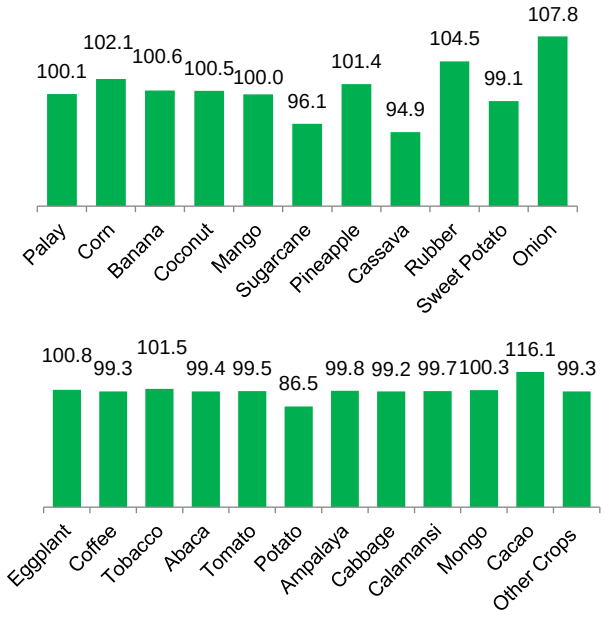
Area Harvested

In 2021, the area harvested for palay at 4.81 million hectares and corn at 2.56 million hectares were above their 2018 records by 0.1 percent and 2.1 percent, respectively. Area harvested for banana at 0.45 million hectares was 0.6 percent higher than its base year's record. Similarly, the area harvested for coconut went up to 3.65 million hectares or 0.5 percent more than the 2018 level. Among the reference crops, cacao reported the biggest increase in area harvested of 16.1 percent from its 2018 record. Area harvested expansions were also recorded for pineapple, rubber, onion, and tobacco with corresponding increments of 1.4 percent, 4.5 percent, 7.8 percent, and 1.5 percent from their respective base year areas harvested. Less than 1 percent improvements from the 2018 level were recorded for mango, eggplant, and mongo.

On the other hand, the area harvested for potato was -13.5 percent below its 2018 area harvested. Moreover, it recorded the biggest reduction in area harvested among the reference crops. Similarly, lower than the base year area harvested was exhibited in sugarcane by -3.9 percent and cassava by -5.1 percent. Meanwhile, area harvested of the other seven reference crops decreased and fell below the base year's area harvested. (Table 1a and Figure 1)

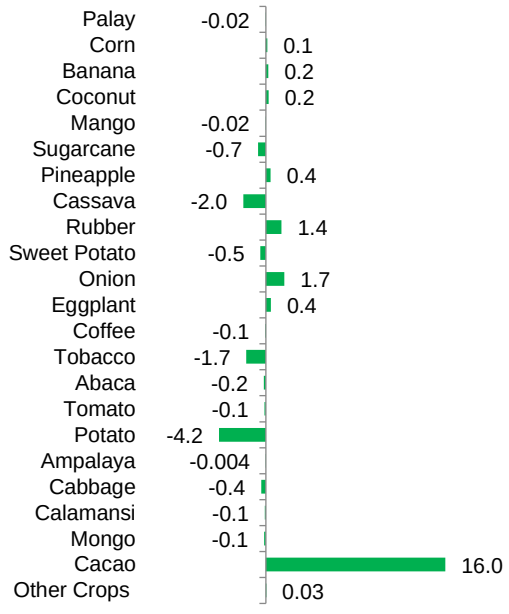
For the period 2017 to 2021, palay area harvested decreased annually by an average of -0.02 percent, while corn area harvested expanded by an average of 0.1 percent. Among the reference crops, the area harvested for cacao showed a continuous uptrend over the five-year period and resulted to the biggest increment in area harvested which averaged to 16.0 percent annually.

Figure 1. Indices of Area Harvested for Agricultural Crops, Philippines, 2021
(2018=100)
(in percent)



Source of basic data: Philippine Statistics Authority

Figure 2. Average Growth Rates of Area Harvested for Agricultural Crops, Philippines, 2017-2021
(in percent)

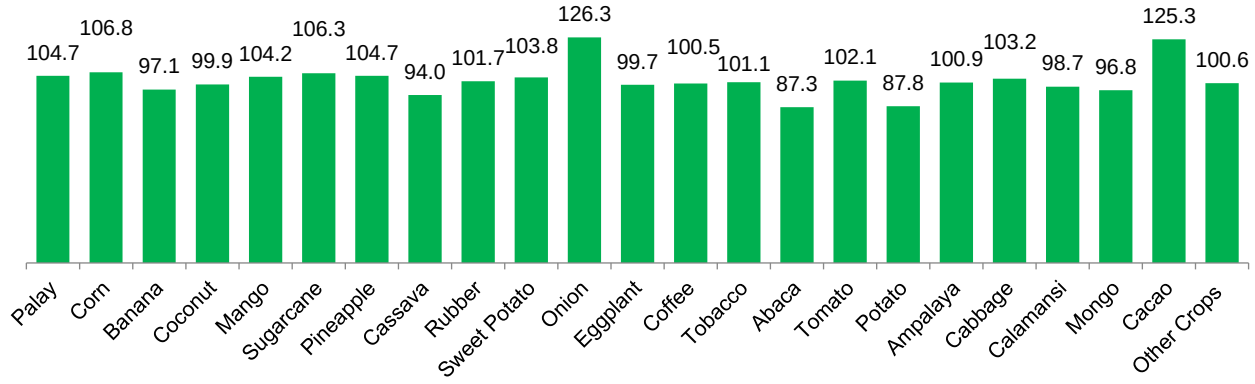


Source of basic data: Philippine Statistics Authority

This was followed by onion and rubber with average increases of 1.7 percent and 1.4 percent, respectively. In contrast, average yearly decreases were observed in potato at -4.2 percent and cassava at -2.0 percent. (Table 1b and Figure 2)

Production

Figure 3. Indices of Production for Agricultural Crops, Philippines, 2021
(2018=100)
(in percent)



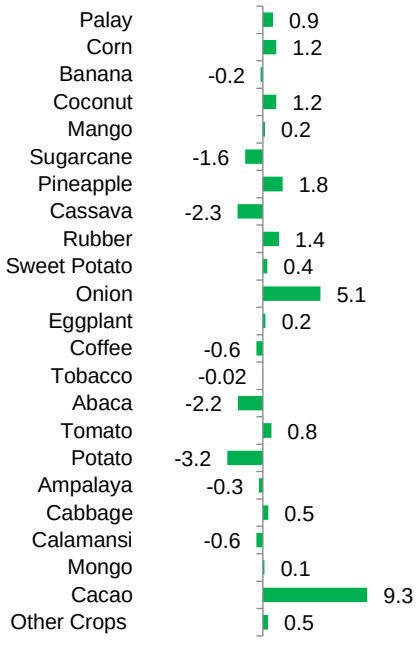
Source of basic data: Philippine Statistics Authority

The 2021 palay production registered an output growth of 19.96 million metric tons or by 4.7 percent from its 2018 level. Likewise, corn production went up to 8.30 million metric tons or by 6.8 percent from the base years' record. Higher production levels than the base years' outputs were reported in most of the reference crops in 2021. Onion production had the biggest increment of 26.3 percent from its 2018 level. This was followed by cacao which was 25.3 percent more than its base year output. Meanwhile, the largest output reductions from the 2018 level were observed in abaca at -12.7 percent and potato at -12.2 percent. (Table 2a and Figure 3)

Annually, the production levels of palay and corn from 2017 to 2021 grew by an average of 0.9 percent and 1.2 percent, respectively. Among the other agricultural crops, cacao maintained positive growth rates during the reference years and had the biggest average annual growth of 9.3 percent.

Average yearly gains were also observed in the production levels of most of the reference crops such as onion at 5.1 percent, pineapple at 1.8 percent, rubber at 1.4 percent, and coconut at 1.2 percent. In contrast, the biggest average annual decreases in outputs were reported in potato at -3.2 percent, cassava at -2.3 percent, and abaca at -2.2 percent. (Table 2b and Figure 4)

Figure 4. Average Growth Rates of Production for Agricultural Crops, Philippines, 2017-2021
(in percent)



Source of basic data: Philippine Statistics Authority

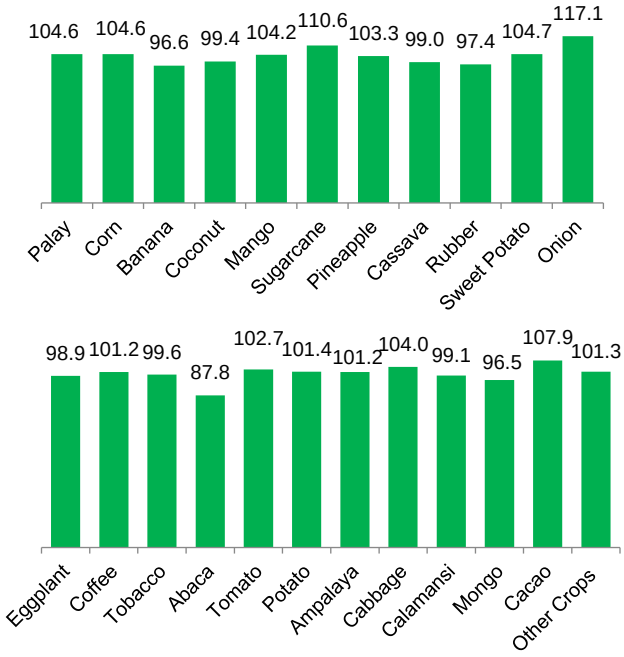
Yield

In 2021, palay yield was at 4.15 metric tons per hectare and corn yield at 3.24 metric tons per hectare, both indicate 4.6 percent increase from their respective 2018 levels.

Yield of onion and sugarcane obtained the biggest increments with 17.1 percent and 10.6 percent, respectively. Increases in yield were also observed in cacao at 7.9 percent, sweet potato at 4.7 percent, mango at 4.2 percent, and cabbage at 4.0 percent. Below the base year yield levels were reported in banana, coconut, cassava, rubber, eggplant, tobacco, abaca, calamansi, and mongo. Abaca yield in 2021 recorded the biggest reduction at -12.2 percent. (Table 3a and Figure 5)

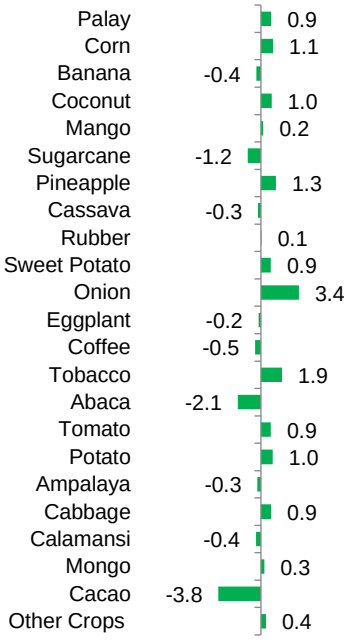
From 2017 to 2021, the yield of palay grew by an average of 0.9 percent per year, while corn yield went up by 1.1 percent annually. Majority of the other reference crops exhibited increasing yield levels. Onion obtained the biggest growth in yield at an average of 3.4 percent per year. Ten other reference crops recorded average increases ranging from 0.3 percent to 1.9 percent. In contrast, cacao at -3.8 percent reported the biggest average reduction in yield. This was followed by abaca and sugarcane with respective yield contractions of -2.1 percent and -1.2 percent. (Table 3b and Figure 6)

Figure 5. Indices of Yield for Agricultural Crops, Philippines, 2021
(2018=100)
(in percent)



Source of basic data: Philippine Statistics Authority

Figure 6. Average Growth Rates of Yield for Agricultural Crops, Philippines, 2017-2021
(in percent)



Source of basic data: Philippine Statistics Authority

Livestock and Poultry

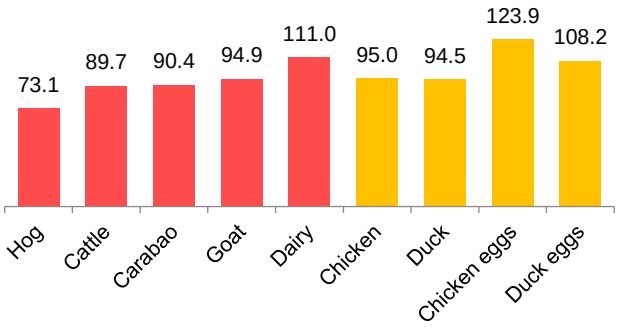
Production indices measure the growth of each livestock and poultry component in a given period compared with that of the base year. The yearly changes in the production of livestock and poultry describe the performance of each animal/bird type across the period in review.

In 2021, the production levels of all livestock commodities, except dairy, were lower than their respective 2018 output records. Hog production at 1.70 million metric tons reported the biggest decline of -26.9 percent from its base year's level. This was followed by cattle with production losses of -10.3 percent. Lower than the base year production levels were also reported in carabao at -9.6 percent and goat at -5.1 percent. On the other hand, growth in production was registered in dairy at 11.0 percent in 2021.

For poultry products, the production levels of chicken and duck in 2021 remained below their respective base year's level by -5.0 percent and -5.5 percent. Meanwhile, chicken eggs and duck eggs continued to exhibit above the base year production levels by 23.9 percent and 8.2 percent, respectively. (Table 4a and Figure 7)

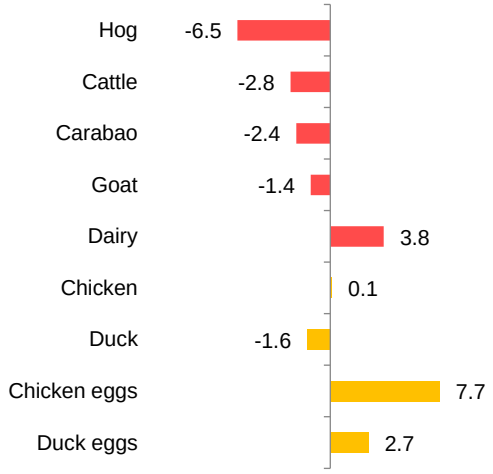
Over the period 2017 to 2021, downtrends in production levels continued in all livestock products except dairy. Hog posted the biggest average reduction of -6.5 percent annually. Negative growth rates were also reported in cattle at -2.8 percent, carabao at -2.4 percent, and goat at -1.4 percent during the five-year period. In contrast, dairy production posted an annual increase of 3.8 percent, on the average.

Figure 7. Indices of Volume for Livestock and Poultry, Philippines, 2021
(2018=100)
(in percent)



Source of basic data: Philippine Statistics Authority

Figure 8. Average Growth Rates for Volume of Livestock and Poultry, Philippines, 2017-2021
(in percent)



Source of basic data: Philippine Statistics Authority

For poultry production, increases were reported in chicken, chicken eggs, and duck eggs with respective average increments of 0.1 percent, 7.7 percent, and 2.7 percent annually. Only duck production posted continuous annual negative growth, averaging -1.6 percent. (Table 4b and Figure 8)

Fisheries

Information on the indices of fisheries production provides a measure of the development of the fisheries industry through the years. Growth rates show the year-on-year variation in the volume of fisheries production by subsector and by species. Fisheries cover commercial, municipal, and aquaculture fishing.

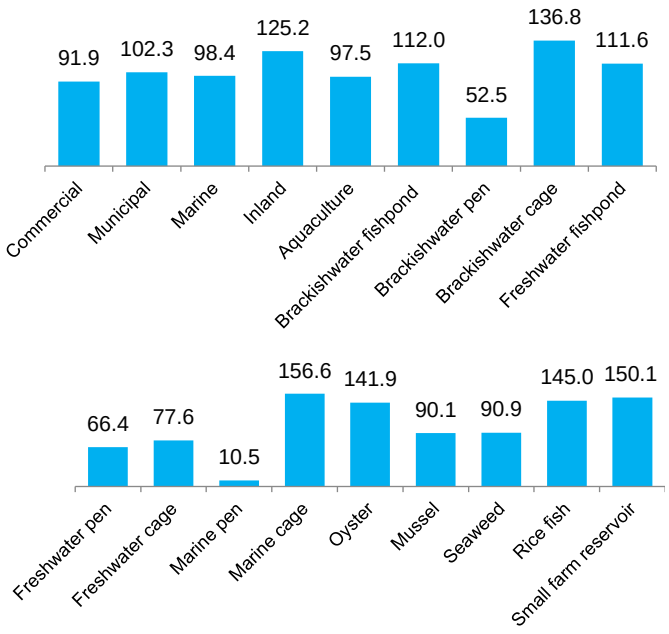
By Subsector

Commercial fisheries production, estimated at 0.87 million metric tons in 2021, was -8.1 percent lower than the base year's record. Volume of municipal fisheries production totaled 1.13 million metric tons which represents an uptrend by 2.3 percent from the 2018 level. This can be attributed to the increase in inland municipal fisheries production by 25.2 percent. However, production in marine municipal fisheries in 2021 was below the base year's level by -1.6 percent.

The volume of aquaculture production in 2021 at 2.25 million metric tons registered a reduction of -2.5 percent from the 2018 record. Among aquaculture, the production level of marine pen posted the biggest decline of -89.5 percent followed by brackishwater pen by -47.5 percent. (Table 5a and Figure 9)

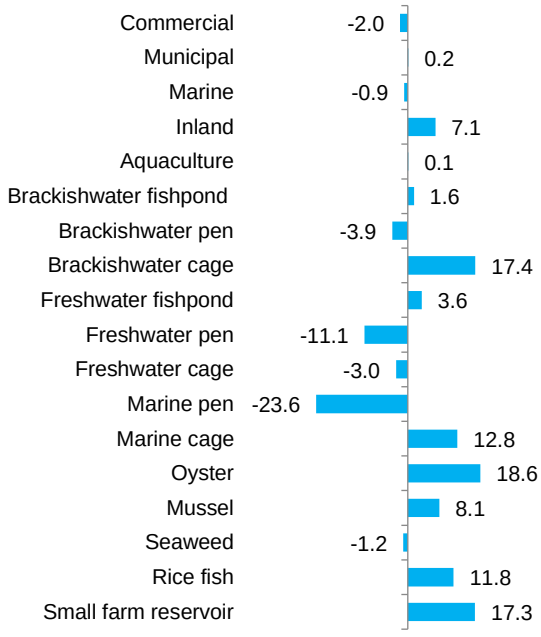
From 2017 to 2021, commercial fisheries production contracted year-on-year by an average of -2.0 percent. On the other hand, the volume of production in municipal fisheries and aquaculture reported annual increases corresponding to 0.2 percent and 0.1 percent. In particular, marine municipal fisheries declined annually by an average of -0.9 percent, while inland fisheries moved up by an average of 7.1 percent. For aquaculture, change in annual growth in production was recorded in the following: oyster at 18.6 percent, brackishwater cage at 17.4 percent, and small farm reservoir at 17.3 percent. (Table 5b and Figure 10)

Figure 9. Indices of Volume for Fisheries Production by Subsector, Philippines, 2021
(2018=100)
(in percent)



Source of basic data: Philippine Statistics Authority

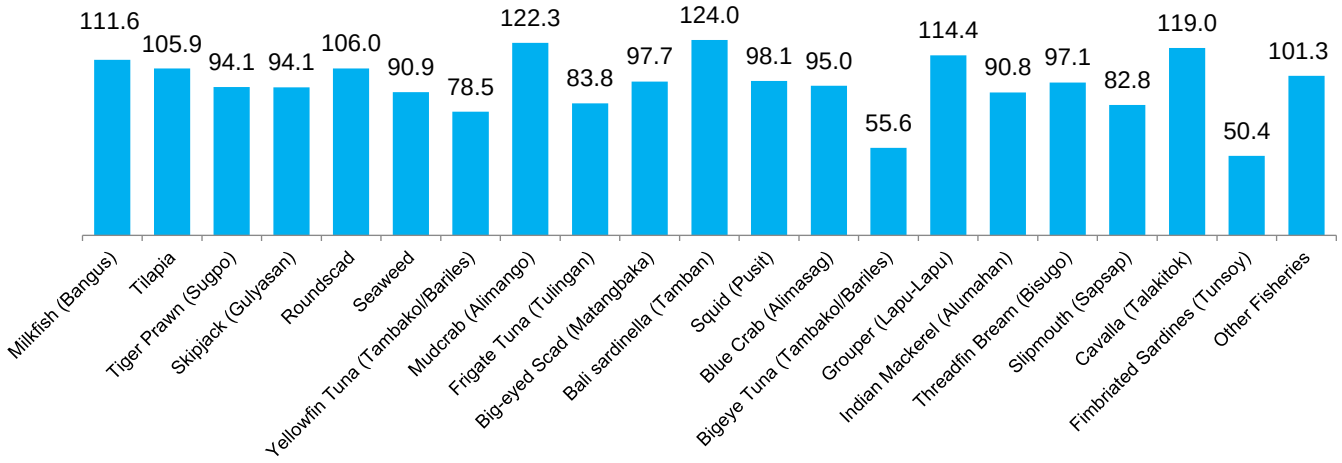
Figure 10. Average Growth Rates of Volume for Fisheries Production by Subsector, Philippines, 2017-2021
(in percent)



Source of basic data: Philippine Statistics Authority

By Species

Figure 11. Indices of Volume for Fisheries Production by Species, Philippines, 2021
(2018=100)
(in percent)

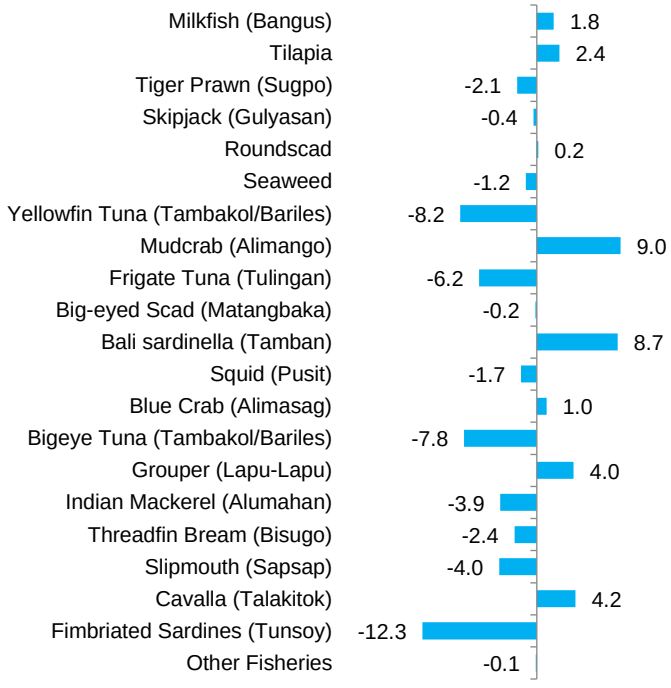


Source of basic data: Philippine Statistics Authority

In 2021, majority of the reference species posted production levels below their 2018 records. Production of fimbriated sardines at 44.15 thousand metric tons had the biggest reduction of -49.6 percent. This was followed by bigeye tuna which went down to 17.31 thousand metric tons or -44.4 percent from the 2018 level. Among the reference species, seaweed production reported the biggest output at 1.34 million metric tons. However, its production was down by -10.1 percent compared to its the 2018 output. Meanwhile, increases were observed in *Bali sardinella* at 24.0 percent, mudcrab at 22.3 percent, cavalla at 19.0 percent, grouper at 14.4 percent, and milkfish at 11.6 percent. (Table 6a and Figure 11)

During the five-year period, declining trends were exhibited by most of the reference species. Fimbriated sardines indicated the biggest annual decline at an average of -12.3 percent. Output losses were also observed in yellowfin tuna, frigate tuna, and bigeye tuna with corresponding average annual decreases of -8.2 percent, -6.2 percent, and -7.8 percent. In contrast, the average annual production increments were higher for mudcrab at 9.0 percent and *Bali sardinella* at 8.7 percent. (Table 6b and Figure 12)

Figure 12. Average Growth Rates of Volume for Fisheries Production by Species, Philippines, 2017-2021
(in percent)



Source of basic data: Philippine Statistics Authority

STATISTICAL TABLES

Table 1a. Indices of Area Harvested for Agricultural Crops, Philippines, 2017-2021
(2018=100)
(in percent)

Commodity	2018 Area ('000 has.)	Indices					2021 Area ('000 has.)
		2017	2018	2019	2020	2021	
Palay	4,800.41	100.2	100.0	96.9	98.3	100.1	4,805.08
Corn	2,511.44	101.6	100.0	100.2	101.7	102.1	2,564.38
Banana	447.89	99.7	100.0	100.3	100.7	100.6	450.42
Coconut	3,628.13	99.6	100.0	100.7	100.6	100.5	3,646.91
Mango	185.86	100.1	100.0	100.4	100.5	100.0	185.90
Sugarcane	437.51	100.0	100.0	86.7	91.2	96.1	420.23
Pineapple	66.19	99.7	100.0	99.8	101.0	101.4	67.12
Cassava	227.64	103.0	100.0	97.7	96.3	94.9	216.11
Rubber	228.94	98.8	100.0	100.2	100.8	104.5	239.14
Sweet Potato	84.05	101.1	100.0	99.2	99.6	99.1	83.31
Onion	17.90	102.0	100.0	111.4	102.7	107.8	19.30
Eggplant	21.65	99.0	100.0	100.8	100.6	100.8	21.83
Coffee	113.35	99.6	100.0	98.8	99.9	99.3	112.55
Tobacco	28.21	109.3	100.0	99.3	102.5	101.5	28.62
Abaca	132.25	100.2	100.0	100.1	100.1	99.4	131.51
Tomato	16.49	100.0	100.0	99.2	99.7	99.5	16.40
Potato	7.57	102.9	100.0	99.3	95.3	86.5	6.55
Ampalaya	10.68	99.8	100.0	100.0	100.1	99.8	10.66
Cabbage	7.84	100.9	100.0	100.1	102.3	99.2	7.77
Calamansi	19.78	100.1	100.0	99.2	99.6	99.7	19.71
Mongo	41.58	100.8	100.0	100.4	100.7	100.3	41.70
Cacao	27.13	67.3	100.0	111.5	115.4	116.1	31.50
Other Crops	413.82	99.1	100.0	98.7	99.3	99.3	410.77

Source of basic data: Philippine Statistics Authority

Table 1b. Growth Rates of Area Harvested for Agricultural Crops, Philippines, 2017-2021
(in percent)

Commodity	2017 Area ('000 has.)	Growth Rates				Average 2017-2021
		2017-2018	2018-2019	2019-2020	2020-2021	
Palay	4,811.81	-0.2	-3.1	1.4	1.8	-0.02
Corn	2,552.59	-1.6	0.2	1.5	0.4	0.1
Banana	446.76	0.3	0.3	0.5	-0.2	0.2
Coconut	3,612.30	0.4	0.7	-0.02	-0.1	0.2
Mango	186.04	-0.1	0.4	0.1	-0.5	-0.02
Sugarcane	437.47	0.01	-13.3	5.2	5.3	-0.7
Pineapple	66.00	0.3	-0.2	1.2	0.4	0.4
Cassava	234.54	-2.9	-2.3	-1.4	-1.4	-2.0
Rubber	226.28	1.2	0.2	0.6	3.6	1.4
Sweet Potato	84.97	-1.1	-0.8	0.4	-0.5	-0.5
Onion	18.26	-1.9	11.4	-7.8	5.0	1.7
Eggplant	21.45	1.0	0.8	-0.2	0.2	0.4
Coffee	112.84	0.5	-1.2	1.1	-0.6	-0.1
Tobacco	30.83	-8.5	-0.7	3.3	-1.0	-1.7
Abaca	132.46	-0.2	0.1	-0.01	-0.6	-0.2
Tomato	16.49	0.02	-0.8	0.5	-0.3	-0.1
Potato	7.79	-2.8	-0.7	-4.0	-9.2	-4.2
Ampalaya	10.66	0.2	-0.03	0.1	-0.3	-0.004
Cabbage	7.91	-0.9	0.1	2.2	-3.1	-0.4
Calamansi	19.79	-0.1	-0.8	0.4	0.1	-0.1
Mongo	41.93	-0.8	0.4	0.3	-0.4	-0.1
Cacao	18.26	48.6	11.5	3.4	0.6	16.0
Other Crops	410.30	0.9	-1.3	0.5	-0.01	0.03

Source of basic data: Philippine Statistics Authority

Table 2a. Indices of Production for Agricultural Crops, Philippines, 2017-2021
(2018=100)
(in percent)

Commodity	2018 Prod'n ('000 mt.)	Indices					2021 Prod'n ('000 mt.)
		2017	2018	2019	2020	2021	
Palay	19,066.09	101.1	100.0	98.7	101.2	104.7	19,960.17
Corn	7,771.92	101.8	100.0	102.7	104.5	106.8	8,300.32
Banana	9,358.78	97.9	100.0	97.9	96.8	97.1	9,091.31
Coconut	14,726.17	95.4	100.0	100.3	98.4	99.9	14,717.29
Mango	711.66	103.6	100.0	103.7	103.9	104.2	741.69
Sugarcane	24,730.82	118.4	100.0	83.8	98.7	106.3	26,277.40
Pineapple	2,730.98	97.8	100.0	100.6	99.0	104.7	2,860.20
Cassava	2,723.03	103.1	100.0	96.6	95.8	94.0	2,559.81
Rubber	423.37	96.1	100.0	102.0	99.8	101.7	430.64
Sweet Potato	525.63	102.2	100.0	100.0	104.0	103.8	545.52
Onion	172.67	106.8	100.0	128.6	132.9	126.3	218.05
Eggplant	244.84	98.8	100.0	102.1	99.1	99.7	244.03
Coffee	60.31	102.9	100.0	99.6	100.5	100.5	60.61
Tobacco	50.38	101.3	100.0	101.3	104.1	101.1	50.93
Abaca	71.52	96.3	100.0	101.0	99.2	87.3	62.40
Tomato	220.82	99.1	100.0	101.1	100.5	102.1	225.45
Potato	117.42	100.2	100.0	98.8	96.7	87.8	103.06
Ampalaya	87.40	102.4	100.0	102.2	100.5	100.9	88.22
Cabbage	120.66	101.5	100.0	106.1	107.6	103.2	124.49
Calamansi	113.55	102.7	100.0	110.9	95.7	98.7	112.13
Mongo	36.66	96.4	100.0	98.9	101.0	96.8	35.48
Cacao	7.98	87.8	100.0	106.3	117.0	125.3	10.00
Other Crops	3,426.48	98.7	100.0	100.2	99.7	100.6	3,446.45

Source of basic data: Philippine Statistics Authority

Table 2b. Growth Rates of Production for Agricultural Crops, Philippines, 2017-2021
(in percent)

Commodity	2017 Prod'n ('000 mt.)	Growth Rates				Average 2017-2021
		2017-2018	2018-2019	2019-2020	2020-2021	
Palay	19,276.35	-1.1	-1.3	2.6	3.4	0.9
Corn	7,914.91	-1.8	2.7	1.8	2.2	1.2
Banana	9,166.33	2.1	-2.1	-1.1	0.4	-0.2
Coconut	14,049.13	4.8	0.3	-1.9	1.6	1.2
Mango	737.03	-3.4	3.7	0.2	0.3	0.2
Sugarcane	29,286.89	-15.6	-16.2	17.8	7.7	-1.6
Pineapple	2,671.71	2.2	0.6	-1.6	5.8	1.8
Cassava	2,806.67	-3.0	-3.4	-0.9	-1.8	-2.3
Rubber	406.98	4.0	2.0	-2.1	1.9	1.4
Sweet Potato	537.30	-2.2	0.04	4.0	-0.3	0.4
Onion	184.43	-6.4	28.6	3.4	-5.0	5.1
Eggplant	241.90	1.2	2.1	-2.9	0.5	0.2
Coffee	62.08	-2.8	-0.4	1.0	-0.1	-0.6
Tobacco	51.02	-1.3	1.3	2.7	-2.9	-0.02
Abaca	68.84	3.9	1.0	-1.7	-12.0	-2.2
Tomato	218.79	0.9	1.1	-0.6	1.6	0.8
Potato	117.64	-0.2	-1.2	-2.2	-9.3	-3.2
Ampalaya	89.46	-2.3	2.2	-1.7	0.5	-0.3
Cabbage	122.47	-1.5	6.1	1.4	-4.1	0.5
Calamansi	116.66	-2.7	10.9	-13.7	3.2	-0.6
Mongo	35.34	3.7	-1.1	2.2	-4.2	0.1
Cacao	7.01	13.9	6.3	10.0	7.1	9.3
Other Crops	3,383.49	1.3	0.2	-0.6	0.9	0.5

Source of basic data: Philippine Statistics Authority

Table 3a.Indices of Yield for Agricultural Crops, Philippines, 2017-2021
(2018=100)
(in percent)

Commodity	2018 Yield mt./ha.	Indices					2021 Yield mt./ha.
		2017	2018	2019	2020	2021	
Palay	3.97	100.9	100.0	101.8	102.9	104.6	4.15
Corn	3.09	100.2	100.0	102.4	102.7	104.6	3.24
Banana	20.90	98.2	100.0	97.6	96.1	96.6	20.18
Coconut	4.06	95.8	100.0	99.6	97.8	99.4	4.04
Mango	3.83	103.5	100.0	103.3	103.4	104.2	3.99
Sugarcane	56.53	118.4	100.0	96.6	108.2	110.6	62.53
Pineapple	41.26	98.1	100.0	100.8	98.0	103.3	42.61
Cassava	11.96	100.0	100.0	98.9	99.4	99.0	11.84
Rubber	1.85	97.3	100.0	101.7	99.0	97.4	1.80
Sweet Potato	6.25	101.1	100.0	100.9	104.5	104.7	6.55
Onion	9.64	104.7	100.0	115.4	129.4	117.1	11.30
Eggplant	11.31	99.7	100.0	101.3	98.6	98.9	11.18
Coffee	0.53	103.4	100.0	100.7	100.6	101.2	0.54
Tobacco	1.79	92.7	100.0	102.1	101.5	99.6	1.78
Abaca	0.54	96.1	100.0	100.9	99.1	87.8	0.47
Tomato	13.39	99.1	100.0	101.9	100.8	102.7	13.74
Potato	15.51	97.3	100.0	99.6	101.5	101.4	15.73
Ampalaya	8.18	102.6	100.0	102.3	100.4	101.2	8.28
Cabbage	15.39	100.6	100.0	106.0	105.1	104.0	16.01
Calamansi	5.74	102.7	100.0	111.8	96.1	99.1	5.69
Mongo	0.88	95.6	100.0	98.5	100.4	96.5	0.85
Cacao	0.29	130.4	100.0	95.4	101.4	107.9	0.32
Other Crops	8.28	99.6	100.0	101.5	100.4	101.3	8.39

Source of basic data: Philippine Statistics Authority

Table 3b. Growth Rates of Yield for Agricultural Crops, Philippines, 2017-2021
(in percent)

Commodity	2017 Yield mt./ha.	Growth Rates				Average 2017-2021
		2017-2018	2018-2019	2019-2020	2020-2021	
Palay	4.01	-0.9	1.8	1.1	1.6	0.9
Corn	3.10	-0.2	2.4	0.3	1.8	1.1
Banana	20.52	1.8	-2.4	-1.6	0.6	-0.4
Coconut	3.89	4.4	-0.4	-1.8	1.7	1.0
Mango	3.96	-3.3	3.3	0.1	0.8	0.2
Sugarcane	66.95	-15.6	-3.4	11.9	2.3	-1.2
Pineapple	40.48	1.9	0.8	-2.8	5.4	1.3
Cassava	11.97	-0.04	-1.1	0.6	-0.4	-0.3
Rubber	1.80	2.8	1.7	-2.7	-1.6	0.1
Sweet Potato	6.32	-1.1	0.9	3.6	0.2	0.9
Onion	10.10	-4.5	15.4	12.1	-9.5	3.4
Eggplant	11.28	0.3	1.3	-2.7	0.3	-0.2
Coffee	0.55	-3.3	0.7	-0.1	0.6	-0.5
Tobacco	1.66	7.9	2.1	-0.5	-1.9	1.9
Abaca	0.52	4.1	0.9	-1.7	-11.5	-2.1
Tomato	13.27	0.9	1.9	-1.1	1.8	0.9
Potato	15.10	2.7	-0.4	1.9	-0.1	1.0
Ampalaya	8.39	-2.5	2.3	-1.8	0.8	-0.3
Cabbage	15.48	-0.6	6.0	-0.8	-1.1	0.9
Calamansi	5.90	-2.6	11.8	-14.0	3.0	-0.4
Mongo	0.84	4.6	-1.5	1.9	-3.8	0.3
Cacao	0.38	-23.3	-4.6	6.4	6.4	-3.8
Other Crops	8.25	0.4	1.5	-1.1	0.9	0.4

Source of basic data: Philippine Statistics Authority

Table 4a. Indices of Volume for Livestock and Poultry Production, Philippines, 2017-2021
(2018=100)
(in percent)

Commodity	2018 Prod'n ('000 mt)	Indices					2021 Prod'n ('000 mt)
		2017	2018	2019	2020	2021	
Livestock							
Hog	2,319.76	97.6	100.0	99.0	92.4	73.1	1,696.15
Cattle	263.31	101.1	100.0	99.0	87.0	89.7	236.11
Carabao	143.14	100.9	100.0	98.3	84.1	90.4	129.34
Goat	76.95	100.5	100.0	99.2	93.2	94.9	73.04
Dairy	23.69	96.1	100.0	102.9	112.7	111.0	26.30
Poultry							
Chicken	1,836.66	95.1	100.0	104.9	98.5	95.0	1,744.80
Duck	30.81	100.9	100.0	97.7	95.9	94.5	29.10
Chicken eggs	533.91	92.2	100.0	109.2	113.5	123.9	661.39
Duck eggs	46.61	97.5	100.0	106.3	108.3	108.2	50.45

Source of basic data: Philippine Statistics Authority

Table 4b. Growth Rates of Volume for Livestock and Poultry Production, Philippines, 2017-2021
(in percent)

Commodity	2017 Prod'n ('000 mt)	Growth Rates				Average 2017-2021
		2017-2018	2018-2019	2019-2020	2020-2021	
Livestock						
Hog	2,265.02	2.4	-1.0	-6.7	-20.8	-6.5
Cattle	266.30	-1.1	-1.0	-12.1	3.0	-2.8
Carabao	144.41	-0.9	-1.7	-14.4	7.4	-2.4
Goat	77.34	-0.5	-0.8	-6.1	1.8	-1.4
Dairy	22.76	4.1	2.9	9.6	-1.5	3.8
Poultry						
Chicken	1,745.89	5.2	4.9	-6.1	-3.6	0.1
Duck	31.09	-0.9	-2.3	-1.8	-1.5	-1.6
Chicken eggs	492.41	8.4	9.2	3.9	9.2	7.7
Duck eggs	45.43	2.6	6.3	1.8	-0.1	2.7

Source of basic data: Philippine Statistics Authority

Table 5a. Indices of Volume for Fisheries Production by Subsector, Philippines, 2017-2021
(2018=100)
(in percent)

Subsector	2018 Prod'n ('000 mt)	Indices					2021 Prod'n ('000 mt)
		2017	2018	2019	2020	2021	
A. Commercial	946.44	100.2	100.0	98.4	103.0	91.9	870.04
B. Municipal	1,106.07	101.8	100.0	101.7	99.7	102.3	1,131.91
Marine	941.87	102.2	100.0	102.9	101.1	98.4	926.37
Inland	164.20	99.8	100.0	95.3	91.4	125.2	205.54
C. Aquaculture	2,304.37	97.1	100.0	102.3	100.8	97.5	2,246.32
Brackishwater fishpond	325.50	105.6	100.0	106.0	105.8	112.0	364.40
Brackishwater pen	2.88	95.9	100.0	66.9	31.7	52.5	1.51
Brackishwater cage	1.25	74.3	100.0	95.6	114.7	136.8	1.71
Freshwater fishpond	161.52	96.9	100.0	101.0	105.8	111.6	180.28
Freshwater pen	57.64	109.0	100.0	94.7	69.1	66.4	38.30
Freshwater cage	103.35	92.6	100.0	99.9	71.6	77.6	80.18
Marine pen	9.87	111.7	100.0	84.1	8.6	10.5	1.03
Marine cage	108.95	98.0	100.0	109.3	137.4	156.6	170.61
Oyster	28.71	79.9	100.0	126.1	184.7	141.9	40.74
Mussel	26.30	73.0	100.0	96.6	73.1	90.1	23.71
Seaweed	1,478.30	95.7	100.0	101.5	99.3	90.9	1,343.71
Rice fish	0.003	100.6	100.0	152.7	149.6	145.0	0.01
Small farm reservoir	0.08	80.3	100.0	107.5	137.4	150.1	0.12

Source of basic data: Philippine Statistics Authority

Table 5b. Growth Rates of Volume for Fisheries Production by Subsector, Philippines, 2017-2021
(in percent)

Subsector	2017 Prod'n ('000 mt)	Growth Rates				Average 2017-2021
		2017-2018	2018-2019	2019-2020	2020-2021	
A. Commercial	948.28	-0.2	-1.6	4.7	-10.8	-2.0
B. Municipal	1,126.02	-1.8	1.7	-2.0	2.7	0.2
Marine	962.15	-2.1	2.9	-1.7	-2.7	-0.9
Inland	163.87	0.2	-4.7	-4.1	37.0	7.1
C. Aquaculture	2,237.79	3.0	2.3	-1.5	-3.3	0.1
Brackishwater fishpond	343.79	-5.3	6.0	-0.3	5.9	1.6
Brackishwater pen	2.77	4.2	-33.1	-52.6	65.7	-3.9
Brackishwater cage	0.93	34.6	-4.4	20.0	19.3	17.4
Freshwater fishpond	156.47	3.2	1.0	4.7	5.5	3.6
Freshwater pen	62.81	-8.2	-5.3	-27.0	-3.9	-11.1
Freshwater cage	95.70	8.0	-0.1	-28.3	8.3	-3.0
Marine pen	11.02	-10.5	-15.9	-89.8	22.0	-23.6
Marine cage	106.77	2.0	9.3	25.7	14.0	12.8
Oyster	22.94	25.1	26.1	46.5	-23.2	18.6
Mussel	19.21	36.9	-3.4	-24.4	23.3	8.1
Seaweed	1,415.32	4.4	1.5	-2.1	-8.5	-1.2
Rice fish	0.003	-0.6	52.7	-2.1	-3.1	11.8
Small farm reservoir	0.07	24.5	7.5	27.8	9.3	17.3

Source of basic data: Philippine Statistics Authority

Table 6a. Indices of Volume for Fisheries Production by Species, Philippines, 2017-2021
(2018=100)
(in percent)

Commodity	2018 Prod'n ('000 mt)	Indices					2021 Prod'n ('000 mt)
		2017	2018	2019	2020	2021	
Milkfish (Bangus)	400.12	104.1	100.0	103.7	105.2	111.6	446.38
Tilapia	321.08	96.9	100.0	100.0	94.8	105.9	340.07
Tiger Prawn (Sugpo)	44.88	102.8	100.0	102.5	94.6	94.1	42.26
Skipjack (Gulyasan)	258.38	95.8	100.0	103.1	100.9	94.1	243.14
Roundscad	171.31	106.9	100.0	110.3	117.9	106.0	181.52
Seaweed	1,478.30	95.7	100.0	101.5	99.3	90.9	1,343.71
Yellowfin Tuna (Tambakol/Bariles)	94.44	113.2	100.0	105.2	100.5	78.5	74.13
Mudcrab (Alimango)	21.68	87.6	100.0	102.8	102.4	122.3	26.50
Frigate Tuna (Tulingan)	111.92	109.1	100.0	99.6	98.7	83.8	93.78
Big-eyed Scad (Matangbaka)	110.92	98.4	100.0	98.7	94.9	97.7	108.34
Bali sardinella (Tamban)	259.13	93.2	100.0	95.5	131.2	124.0	321.45
Squid (Pusit)	47.33	105.5	100.0	99.2	93.8	98.1	46.45
Blue Crab (Alimasag)	33.93	92.3	100.0	87.5	91.5	95.0	32.22
Bigeye Tuna (Tambakol/Bariles)	31.13	88.8	100.0	57.0	64.0	55.6	17.31
Grouper (Lapu-Lapu)	17.78	98.3	100.0	111.0	110.2	114.4	20.35
Indian Mackerel (Alumahan)	55.77	107.7	100.0	108.0	96.2	90.8	50.66
Threadfin Bream (Bisugo)	36.34	109.0	100.0	113.9	108.3	97.1	35.29
Slipmouth (Sapsap)	47.95	98.5	100.0	96.9	82.6	82.8	39.70
Cavalla (Talakitok)	23.66	101.5	100.0	102.4	109.7	119.0	28.17
Fimbriated Sardines (Tunsoy)	87.58	90.7	100.0	88.7	59.1	50.4	44.15
Other Fisheries	703.24	102.0	100.0	102.9	100.0	101.3	712.69

Source of basic data: Philippine Statistics Authority

Table 6b. Growth Rates of Volume for Fisheries Production by Species, Philippines, 2017-2021
(in percent)

Commodity	2017 Prod'n ('000 mt.)	Growth Rates				Average 2017-2021
		2017-2018	2018-2019	2019-2020	2020-2021	
Milkfish (Bangus)	416.36	-3.9	3.7	1.4	6.0	1.8
Tilapia	310.97	3.2	0.0	-5.2	11.7	2.4
Tiger Prawn (Sugpo)	46.16	-2.8	2.5	-7.7	-0.5	-2.1
Skipjack (Gulyasan)	247.59	4.4	3.1	-2.2	-6.7	-0.4
Roundscad	183.08	-6.4	10.3	6.9	-10.1	0.2
Seaweed	1,415.32	4.4	1.5	-2.1	-8.5	-1.2
Yellowfin Tuna (Tambakol/Bariles)	106.92	-11.7	5.2	-4.5	-21.9	-8.2
Mudcrab (Alimango)	19.00	14.1	2.8	-0.4	19.4	9.0
Frigate Tuna (Tulingan)	122.07	-8.3	-0.4	-0.9	-15.1	-6.2
Big-eyed Scad (Matangbaka)	109.20	1.6	-1.3	-3.9	3.0	-0.2
Bali sardinella (Tamban)	241.48	7.3	-4.5	37.3	-5.4	8.7
Squid (Pusit)	49.91	-5.2	-0.8	-5.4	4.6	-1.7
Blue Crab (Alimasag)	31.33	8.3	-12.5	4.6	3.8	1.0
Bigeye Tuna (Tambakol/Bariles)	27.65	12.6	-43.0	12.3	-13.1	-7.8
Grouper (Lapu-Lapu)	17.48	1.7	11.0	-0.7	3.8	4.0
Indian Mackerel (Alumahan)	60.07	-7.2	8.0	-10.9	-5.6	-3.9
Threadfin Bream (Bisugo)	39.60	-8.2	13.9	-4.9	-10.3	-2.4
Slipmouth (Sapsap)	47.25	1.5	-3.1	-14.8	0.3	-4.0
Cavalla (Talakitok)	24.01	-1.5	2.4	7.1	8.6	4.2
Fimbriated Sardines (Tunsoy)	79.42	10.3	-11.3	-33.4	-14.7	-12.3
Other Fisheries	717.21	-1.9	2.9	-2.8	1.3	-0.1

Source of basic data: Philippine Statistics Authority

MODULES OF THE AGRICULTURAL INDICATORS SYSTEM

1. Government Support in Agriculture Sector
2. Economic Growth: Agriculture
3. **Output and Productivity**
4. Agricultural Resources
5. Agricultural Exports and Imports
6. Food Availability and Sufficiency
7. Prices and Marketing of Agricultural Commodities
8. Employment and Wages in the Agriculture Sector

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OUTPUT AND PRODUCTIVITY
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