

## HIGHLIGHTS



Fisheries production for the first quarter of 2011 was 2.95 percent lower than the production for the same quarter in 2010. Aquaculture production went up by 4.96 percent. On the other hand, production cuts of 19.56 percent for commercial fisheries and 3.22 percent for municipal fisheries were recorded during the reference period (Table 1).

Commercial fishermen produced 234,960.12 metric tons of fish. This was $57,120.78$ metric tons lower than last year's record. Reduced production was noted in 12 regions while the other four (4) regions managed to surpass their last year's records. The production shortfalls were largely attributed to less unloadings of Indian sardines in Zamboanga City which was down by $16,893.75$ metric tons from 26,812.25 in 2010 to $9,918.50$ metric tons this quarter. Moreover, lesser volume of unloadings of frozen tuna at 16,993.63 metric tons from foreign fishing vessels at PFDA fish ports in General Santos City for canneries was recorded this quarter. More unloadings of commercial fish catch were noted in Zamboanga Peninsula and SOCCSKSARGEN and total production corresponded to $41,597.92$ metric tons and $41,164.85$ metric tons, respectively. Except for the Local Government Unit (LGU)-managed landing centers, all other landing centers recorded decreases in volume of unloadings. Traditional landing centers accounted for the bulk of commercial fish unloadings at $130,958.48$ metric tons. Commercial fisheries contributed about 19.38 percent to the total fisheries production during the first quarter of 2011.

Municipal fisheries production at $322,597.86$ metric tons was down by 3.22 percent or $10,723.98$ metric tons from last year's level. The volume of fish unloaded by marine municipal fishing boats decreased by 4.71 percent or $13,706.37$ metric tons. Inland fishing households produced 7.02 percent or $2,982.39$ metric tons more during the reference period. Of the total municipal fish production, 85 percent came from the marine sub-sector which recorded an output decline. This was largely attributed to unpredictable weather that disrupted fishing operations during the $1^{\text {st }}$ quarter of 2011. Likewise, the unstable price of fuel for motorized boats resulted in limited and irregular fishing operations. On the other hand, the unusual heavy rains helped lakes, rivers, creeks, dams and irrigation canals to recover from the effects of the "El Niño" phenomenon experienced in the same quarter last year. This resulted in increased volume of fish catch among inland fishing households. Twelve (12) regions recorded lower production while four (4) regions exhibited higher production. Municipal fisheries accounted for about 26.60 percent of the total fisheries production in the first quarter of 2011.

Aquaculture surpassed its last year's $1^{\text {st }}$ quarter production by $30,944.11$ metric tons or 4.96 percent. This year's production was $655,051.07$ metric tons. Seaweeds contributed more than half ( $71.51 \%$ ) of the total aquaculture production while fins and shellfishes shared 28.49 percent. Seaweed farmers produced $468,444.68$ metric tons or 3.258 .65 metric tons more output this quarter. This was evidenced by the reported
increase in area harvested in response to higher demand and higher price of seaweed. Likewise, availability of planting materials and favorable weather this quarter resulted in higher production. Among the top producing provinces were Zamboanga Sibugay, Bohol, Tawi-Tawi and Sulu. Production gain was also noted in freshwater fish pens, freshwater fish cages and marine fish cages. Aquaculture accounted for about 54.02 percent of the total fisheries production during the first quarter of 2011.

## COMMERCIAL FISHERIES

Commercial fisheries production at 234,960.12 metric tons was down by 19.56 percent or $57,120.78$ metric tons from last year's first quarter record of $292,080.90$ metric tons. The unloadings of commercial fish catch in Zamboanga Peninsula amounted to $41,597.92$ metric tons and in SOCCSKSARGEN, 41,164.84 metric tons. These two (2) regions posted the biggest decreases in the volume of unloadings at 34.29 percent and 27.39 percent, respectively. Reduced production was noted in 12 regions, namely; National Capital Region, Cagayan Valley, CALABARZON, MIMAROPA, Bicol Region, Central Visayas, Eastern Visayas, Zamboanga Peninsula, Northern Mindanao, SOCCSKSARGEN, ARMM and Caraga (Table 2).

The decline in production was largely attributed to the lower volume of fish unloading in Zamboanga Peninsula, specifically in Zamboanga City. This was the result of less occurrence of Indian sardines which volume of unloadings was down by 16,893.75 metric tons, from $26,812.25$ metric tons in 2010 to $9,918.50$ metric tons this quarter. Owners of commercial fishing vessels sent their crew into the sea with the use of fish finder and they found out that there were lesser school of fish for Indian sardines this quarter. Consequently, many commercial fishing vessels were not sent to fish in order to conserve fuel and gasoline. Also, some observers said that the intense heat this quarter affected the appearance of Indian sardines since this species thrive well in cold water temperature. The decrease was also traced to peace and order situation in Zamboanga City and the prohibition of "kubkuban fishing" in Zamboanga Sibugay. Relatedly, it was noted that there was reduced volume of unloadings of frozen tuna at 16,993.63 metric tons for canneries from foreign fishing vessels at Philippine Fisheries Development Authority (PFDA) fish ports in General Santos City this quarter. Production cuts was attributed to lesser fishing operations and trips due to increasing cost of gasoline while some commercial fishing vessels temporarily stopped operation because of high cost of production. The drop in production was explained by lesser number of fishing trips due to the effect of weather disturbances such as northeasterly winds, rough seas and strong winds, specifically, during the first two months of the quarter. The regions affected by these weather disturbances were Cagayan Valley, CALABARZON, MIMAROPA, Eastern Visayas, Northern Mindanao, ARMM and Caraga. Moreover, the slide in production was a result of the existing high seas closure as imposed by the Western and Central Pacific Fisheries Commission (WCPFC) on its members countries to replenish stocks of the highly migratory tuna species.

On the other hand, four (4) regions managed to surpass their last year's record namely; llocos Region, Central Luzon, Western Visayas and Davao Region. Ilocos Region, Central Luzon and Western Visayas attributed their production increment to less weather disturbances and abundant catch of in-season species like skipjack, roundscad, big-eyed scad, crevalle, yellowfin tuna and threadfin bream. The growth in Davao Region was largely attributed to the increased volume of unloadings of yellowfin tuna from foreign fishing vesselsf

Except for local government unit (LGU) managed landing centers which came up with 3.10 percent more production, all landing centers recorded decreases in volume of unloadings. Unloadings at private landing centers and ports

managed by PFDA dropped by 28.35 percent and 39.40 percent, respectively. Traditional landing centers recorded the bulk of unloadings at $130,958.48$ metric tons. However, this registered a decline of 11.27 percent.

## MUNICIPAL FISHERIES

The first three (3) months of 2011 brought rains that caused flooding in several provinces. The unpredictable weather during the first quarter of the year disrupted fishing operations that resulted in a 3.22 percent cut in municipal fish production.

Combined production of marine and inland fisheries for the January to March period reached 322,597.86 metric tons.
 Production in marine fisheries declined by 4.71 percent while that in inland fisheries increased by 7.02 percent. Eighty-five percent of total municipal fish production came from the marine sub-sector. However, marine municipal fisheries sub-sector lost a large volume of fish unloadings amounting to $13,706.37$ metric tons from the output of the same months last year. Consequently, this big deficit from marine fisheries had a significant impact on the quarterly output of the sector (Table 3).

Twelve (12) out of 16 regions recorded a decline in marine fish production. Weather disturbances adversely affected fishing operation in Bicol Region, Zamboanga Peninsula, Eastern Visayas, Caraga and Davao Region. The three (3) regions that were able to surpass their last year's levels were Central Luzon, SOCCSKSARGEN and ARMM with respective production increments of 11.17 percent, 0.85 percent and 3.00 percent. For the first quarter, the leading provinces in marine fisheries production were Palawan with $35,923.39$ metric tons, lloilo with $21,520.29$ metric tons, Zamboanga del Norte with $15,694.89$ metric tons and Surigao del Norte with $11,512.27$ metric tons. Altogether, they contributed 30.54 percent to the total marine fish production.

Among the provinces, the following reported significant decreases on their levels of marine production. Sorsogon had the biggest reduction in the volume of fish unloaded at $2,521.46$ metric tons, followed by Zamboanga del Norte, $2,146.27$ metric tons, Masbate, $1,023.68$ metric tons and Davao del Sur, 971.31 metric tons. Decline in fish catch of sustenance fishermen during the quarter was also evident in the provinces of CALABARZON and MIMAROPA. Fishermen in affected provinces, especially those operating small and nonmotorized fishing bancas, were advised by concerned government agencies to suspend fishing operations due to big waves and strong easterly winds. The unstable price of fuel for motorized boats resulted in limited and irregular fishing operations of municipal fishermen. Some preferred to have alternative occupations like farming and construction jobs.

The drop in volume of fish landed in Zamboanga Sibugay could also be attributed to the shifting of work preferences among fishermen. The demand for seaweed, both from local and foreign markets, encouraged sustenance fishermen to go into seaweed farming. Frequent rains in Zamboanga del Norte paralyzed fishing activities in the province. Majority of municipal boats were on dry-dock during the quarter. Likewise, the changing climatic condition resulted in flooding in several provinces of Davao Region. Cold temperature of sea water affected behaviour of species which tend to stay in deeper portion of the sea resulting in smaller catch of fishermen. The rising price of gold in the market also attracted fishermen to work in small-mining ventures in Compostela Valley. Murky seawater brought by northeast monsoon rains compounded the problem of small fishermen in Northern Mindanao. Poor catch of fishermen in Lanao del Norte, Misamis Occidental and Misamis Oriental was apparent during the quarter. The unusual heavy amount of rainfall and flash floods shortened fishing trips and fishing days of municipal fishermen in Agusan del Norte, Surigao del Norte and Surigao del Sur. In Northern Luzon, some fishermen in llocos Norte and La Union cancelled their daily fishing activities for several days for fear of "tsunami". The uncertainty of catch caused by depletion of fishery resources and destruction of coral reefs in some fishing grounds were also factors in the low production and disappearance of some species.

On the other hand, the heavy rains helped lakes, rivers, creeks, dams and irrigation canals to recover from the effects of "El Niño" phenomenon experienced in the same quarter of last year. High water level induced growth of species dispersed by the Bureau of Fisheries and Aquatic Resources (BFAR) and LGUs. The increased of 7.02 percent from inland fisheries came predominantly from ARMM, SOCCSKSARGEN, CALABARZON, Cagayan Valley and Central Luzon. The top producing provinces for inland fisheries in the first quarter of the year included Laguna with $10,292.83$ metric tons, Rizal with $8,492.62$ metric tons and Maguindanao, $3,509.14$ metric tons. These three (3) provinces constituted almost 50 percent of the total inland fisheries output.

The gains in inland fish production of Maguindanao (47.62 percent), North Cotabato (20.76 percent) and Sultan Kudarat ( 6.12 percent) were due to large volume of freshwater species caught in Lake Buluan and Liguasan Marsh as well as in Lake Lanao in Lanao del Sur. Meanwhile, tons of tilapia, carp, catfish, mudfish and gourami were caught in rivers, dams and creeks in Bulacan, Tarlac, Cagayan and Isabela due to good weather condition and enough water from rainfall. Fish traps and barricades set in Abra River produced good catch of tilapia, eel and other species. Despite the existing ban on gathering of snails ("suso") in Laguna de Bay, some fishermen in Rizal and Laguna continued to engage in this activity due to big demand from fishpond operators and duck growers.

## AQUACULTURE

During the first quarter of 2011, aquaculture production at 655 thousand metric tons grew by 4.96 percent.

Seaweeds accounted for over 70 percent of the total aquaculture output. Zamboanga Peninsula, ARMM and Central Visayas
 were the top contributors to the 7.48 percent production increase during the first quarter of 2011. Planting materials were made available to farm operators in Zamboanga Peninsula and ARMM. Delayed harvest was observed in Central Visayas because it was affected by ice-ice disease during the previous quarter.

Production gains were also noted among freshwater fish pens, freshwater fish cages and marine fish cages. In CALABARZON, some fish cage operators used modular culturing technique that boosted production. Furthermore, availability of fingerlings and abundant food pulled up yield both from fish pens and fish cages. More milkfish were harvested from marine fish cages in llocos Region, specifically, Pangasinan. Operators restocked and harvested the rehabilitated fish cages, hence, they have recovered from losses caused by typhoons during the previous years.

Brackishwater and freshwater fishponds, which accounted for eight (8) percent each of the total aquaculture production recorded 0.23 percent and 5.68 percent less output, respectively. Central Luzon posted the biggest decrease in both culture environments. High water salinity and extended cold season caused stunted growth of brackishwater species in the region. Then, the poor quality of tilapia fingerlings and high cost of inputs led to less freshwater fishpond production.

Table 4 shows the percentage change in production by aquafarm type from 2010 to 2011.

## Type of Aquafarm/Environment

Brackishwater fishpond
Brackishwater fish pen
Brackishwater fish cage
Freshwater fishpond
Freshwater fish pen
Freshwater fish cage
Rice fish
\% Increase (Decrease)
(0.23)
42.65
34.96
12.57
0.80
(28.82)

Type of Aquafarm/Environment
Brackishwater fishpond
Small farm reservoir
Marine fish pen
Marine fish cage
Oyster
Mussel
Seaweed

## \% Increase (Decrease)

(0.23)
45.37
15.16
2.65
(6.05)
7.48

## SELECTED AQUACULTURE SPECIES

## MilKfish

Production of milkfish from aquaculture for the first
 quarter of 2011 at $69,072.05$ metric tons surpassed last year's record by 3.85 percent. Output growth was realized in all types of aqua farms except for marine fish pens (Table 5).

During the $1^{\text {st }}$ quarter of 2011, production of milkfish from brackishwater fishponds was $39,624.89$ metric tons. This was 2.48 percent higher than last year's production. Negros Occidental, Capiz, and Pangasinan contributed to the increase in production from brackishwater fishponds. It was reported that more areas were stocked and utilized in Negros Occidental to respond to higher demand and to avail of better market price. Moreover, continuous demand for milkfish by local cannery 'APAMI' in Capiz was reported. Less mortality and bigger sizes of milkfish were harvested in Pangasinan due to better water condition.

Gains in milkfish production from brackiswater fish pens and fish cages were 53.13 percent and 39.64 percent, respectively. Operators from the major producing provinces increased their harvested area because of availability of fingerlings. Moreover, stocks in other fish cages were harvested earlier in anticipation of flash floods due to frequent rains, particularly, in Agusan del Norte.

The combined production from freshwater fish pens and fish cages registered an increase of 11.84 percent. Freshwater aquafarm operators attributed the gain to the increase in area harvested, availability of stocking materials, and abundant supply of natural food.

Volume of milkfish produced from marine fish cages rose by 16.94 percent. The increase came from Pangasinan, Davao del Norte and Zambales. An increase of 52.45 percent was recorded in Davao del Norte which was the result of shifting of harvest from the fourth quarter of 2010 to the first quarter of 2011 due to low price. Furthermore, expansion of market for milkfish in Caraga particularly in Surigao del Sur and Agusan provinces contributed to the increase in harvests. In Pangasinan, production was up by 20.06 percent due to availability of quality fingerlings, better water condition and absence of weather disturbance. The increase of 15.88 percent in Zambales was traced to availability of quality juvenile and proper feeding management. However, milkfish harvests in Davao del Sur dropped by 26.67 percent. Decrease in stocking rate by 50 percent was recorded due to lack of good market price as the area was affected by oil spill from cargo ship in Malalag Bay.

Milkfish harvests from marine fish pens were reduced by 27 percent. It was reported that damaged fish pens in Pangasinan brought about by typhoon Juan last year remained unrepaired. In Davao del Sur, area harvested decreased because of lower demand for milkfish for export.

## TILAPIA

Tilapia production from all types of aquafarm went down by 3.25 percent this quarter. The production gain from brackishwater fishponds, freshwater fish cages and fish pens as well as those harvested from small farm reservoirs (SFRs) did not offset the decrease in production from freshwater fishponds, brackishwater fish
 cages and fish pens (Table 6).

The 6.16 percent decrease in freshwater fishponds this quarter was contributed by tilapia producing provinces of Central Luzon (Pampanga, Tarlac, Nueva Ecija and Bulacan). Operators in these provinces reduced their area devoted to tilapia culture due to low water level and poor quality fingerlings. Moreover, some operators shifted to palay farming due to financial constraints. On the contrary, production increase in Pangasinan was reported with the usage of quality fingerlings. Furthermore, farmers in the province were encouraged to increase area utilized for tilapia as there was no flooding during the quarter.

The combined output from brackishwater fish pens and fish cages went down by 14.73 percent this quarter as some operators in La Union shifted to milkfish culture. Some fish pens which were damaged by typhoons last year were not repaired. On the other hand, production gains in Cagayan and llocos provinces were indicated with the availability of quality fingerlings from BFAR, improved feeding practices and good weather conditions.


The production gains from freshwater fish cages, fish pens, brackishwater fishponds and SFRs were computed at 0.64 percent, 12.76 percent, 1.96 percent and 32.13 percent, respectively.

The increase in harvests from freshwater fish cages in Batangas and Laguna was due to quality stocks and intensive feeding that hastened the growth of the species. Operators in Batangas utilized modular culturing technique that allowed them to harvest bigger sizes of tilapia. However, tilapia farmers in South Cotabato, Camarines Sur and Ifugao had reduced outputs. Farmers in Camarines Sur experienced financial difficulties due to high cost of inputs while those in South Cotabato delayed their harvesting. It was also reported that there was insufficient supply of tilapia fry in Ifugao.

Tilapia culture in freshwater fish pens grew by 12.76 percent. Operators in Rizal and Laguna noted that there was abundant supply of natural food from Laguna de Bay that enhanced the growth of their stocks. This encouraged farmers to strive more in the care and management of their farms. Similarly, the increased output in Maguindanao was attributed to the improved peace and order situation in the area.

There was production increment of 1.96 percent from brackishwater fishponds this quarter. Among the top producing provinces of brackishwater tilapia, only Zamboanga del Sur recorded production increase of 15.30 percent. This was attributed to the availability of quality fingerlings allowing growers to increase their area harvested. Production declined in other top producing provinces as a consequence of limited supply of tilapia fingerlings, stunted growth caused by the long cold season and damaged fishponds due to previous typhoons.

Harvests of tilapia from SFRs registered an increase this quarter because of sufficient water supply in Quirino, Bulacan and North Cotabato. This allowed farmers to harvest bigger sizes of tilapia. Moreover, some dried up farms in Carmen, Bohol resumed operation during the quarter. The volume of tilapia harvest in Isabela decreased as a result of low water level.

Marine fish cages had no production of tilapia this quarter due to ongoing rehabilitation and repair of damaged fish cages.

## Tiger Prawn

Compared to the first quarter of 2010, this year's tiger prawn production declined by 28.21 percent. Among the top five (5) producing provinces, Zamboanga Sibugay and Pampanga contributed to the big decrease due to high mortality rate caused by intermittent rainfall resulting in unstable salinity of water. There was also a report of less stocking density due to poor quality of post larvae.

On the contrary, production increase in Misamis Occidental and Zamboanga del Sur was attributed to good quality of post larvae, favorable weather conditions, proper management and the continuous technical support like training and demonstration from BFAR. In Lanao del Norte, the increase in production was the result of shifting from tilapia and milkfish to tiger prawn culture because of the good potential for export market (Table 7).


Total production of mud crab for the first quarter of 2011 went down by 6.82 percent. In Sorsogon, the production cut was due to low stocking in anticipation of the effects of frequent rains and the scarcity of crablets. In Pampanga, the decrease was due to the small sizes of harvests due to poor quality of crablets (Table 7).

Meanwhile, production increases in Camarines Norte, Lanao del Norte and Misamis Occidental were the effects of quality crablets, proper management, good water condition, and the abundance of natural food which resulted in big and matured sizes of harvests.

## CARP

Production of carps this quarter increased by 5.87 percent from its 2010 level. Output increases in fish pens, fish cages and SFRs were observed. Good weather conditions benefited the growth of carps in fish pens and fish cages in Laguna de Bay. In the Rizal's side of the bay, the abundant supply of natural food and good quality fingerlings prompted operators to stock more. In Laguna, lesser pollution coming from factories resulted in good water condition that enhanced growth of carps. Moreover, operators did intensive feeding to respond to the high demand for this species. Metro Manila cage operators harvested carps from their rehabilitated farms during the reference quarter. They had no production in same quarter of 2010. Carp production from SFRs also increased as bigger sizes of carps were harvested in Quirino. All these and the combined production in Cagayan, North Cotabato, Bohol and llocos Norte were attributed to high water level that allowed more natural entry of carps into the farms (Table 7).

On the contrary, fishpond production of carps declined from their 2010 level as the top producing provinces, namely Quezon, Pampanga and Lanao del Norte suffered production setbacks. In Quezon, carps had stunted growth due to cold weather. Carps stayed at the bottom of the pond during cold weather to conserve their energy instead of searching for food. Pampanga operators, on the other hand, stocked less fingerlings due to low survival rate. In Lanao del Norte, carps had lesser food intake due to frequent rainfall. Operators also experienced marketing problems, thus, the reduced area of operations.

Carp from rice-fish farms in Pangasinan had no production this quarter. Other provinces producing carps in fishponds and fish cages had lesser harvests, as well, due to lesser natural entry and high cost of feeds.

CATFISH


Catfish production increased by of 42.88 percent this quarter. The upsurge in production in the producing provinces was brought by good weather conditions during the quarter that enhanced the growth of catfish. Furthermore, operators from these provinces were encouraged to culture catfish due to good demand from food establishments (Table 7).

## Seaweed

Seaweed production grew by 7.48 percent in the $1^{\text {st }}$ quarter of 2011. Among the top producing provinces, Zamboanga Sibugay performed strongly with 101.38 percent growth in production. This was evidenced by the reported increase in area harvested. More farmers expanded their areas of cultivation and focused in this venture in response to higher demand and higher price. Likewise, availability of planting materials, favorable weather conditions during the quarter helped in sustaining the upward trend of production in Bohol, Tawi-Tawi and Sulu. Meanwhile, reduction in the harvest of seaweed in Zamboanga del Norte was due to ice-ice disease (Table 8).


## OYSter



Oyster production was up by 2.65 percent this quarter compared to previous year's level. Negros Occidental came up with a significant 210.65 percent growth in production. There were reports that oyster was on its peak harvest season this quarter. The good water and favorable weather conditions enhanced the growth and development of quality spats resulting in bigger sizes of oyster produced in Iloilo and Bulacan.

The negative result in Capiz was due to low quality of oyster harvested. The poor water quality was the effect of continuous rain and strong wind during the period. In Pangasinan, oyster produce was affected by red tide (Table 8).

## Mussel

Production of mussel this quarter was 6.05 percent less compared to that of last year. Production losses in Aklan, Bataan and Capiz were due to the low quality of mussel harvested. Poor growth and depletion of old seedlings were the effects of water pollution. Some farmers refrained from harvesting their stocks.

On the contrary, production in Cavite was up by 41.00 percent. Better alignment of
 stakes with good occurrence and attachment of mussel spats combined with favorable weather were the contributing factors to the increase in production. Farmers were able to harvest their produce simultaneously. In Samar, increases in the number of farmers and area harvested were reported. Adoption of new technology in planting mussel by using horizontal string lines instead of poles was noted (Table 8).

## Fish Prices


Table 1. Fisheries: Volume of Fish Production by Sub-Sector, by Region, Philippines, January - March 2010-2011 ${ }^{\text {P }}$

| Region/ <br> Sub-Sector | Fisheries |  |  | Commercial |  |  | Municipal |  |  | Aquaculture |  | \%Change$11 / 10$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2010 | 2011 |  | 2010 | 2011 |  | 2010 | 2011 |  | 2010 | 2011 |  |
| PHILIPPINES | 1,249,509.70 | 1,212,609.05 | (2.95) | 292,080.90 | 234,960.12 | (19.56) | 333,321.84 | 322,597.86 | (3.22) | 624,106.96 | 655,051.07 | 4.96 |
| NCR | 20,751.91 | 16,811.12 | (18.99) | 19,884.69 | 14,782.56 | (25.66) | 825.28 | 1,681.40 | 103.74 | 41.94 | 347.16 | 727.75 |
| CAR | 1,050.35 | 1,061.47 |  |  |  |  | 256.78 | 265.13 | 3.25 | 793.57 | 796.34 | 0.35 |
| I | 29,995.22 | 31,849.17 | 6.18 | 810.40 | 850.79 | 4.98 | 9,017.10 | 8,463.80 | (6.14) | 20,167.72 | 22,534.58 | 11.74 |
| II | 18,873.41 | 16,587.15 | (12.11) | 5,607.86 | 4,767.16 | (14.99) | 10,362.45 | 9,829.83 | (5.14) | 2,903.10 | 1,990.16 | (31.45) |
| III | 90,113.75 | 86,314.73 | (4.22) | 1,642.33 | 1,869.46 | 13.83 | 11,329.50 | 12,514.75 | 10.46 | 77,141.92 | 71,930.52 | (6.76) |
| IV-A | 92,247.27 | 91,809.28 | (0.47) | 23,365.71 | 18,887.83 | (19.16) | 28,732.47 | 28,255.02 | (1.66) | 40,149.09 | 44,666.43 | 11.25 |
| IV-B | 76,392.70 | 75,044.49 | (1.76) | 9,149.01 | 7,945.34 | (13.16) | 44,111.14 | 43,260.11 | (1.93) | 23,132.55 | 23,839.04 | 3.05 |
| V | 72,846.62 | 65,003.41 | (10.77) | 16,148.46 | 14,337.06 | (11.22) | 39,431.09 | 34,557.92 | (12.36) | 17,267.07 | 16,108.43 | (6.71) |
| VI | 105,928.05 | 109,274.27 | 3.16 | 24,095.89 | 24,388.19 | 1.21 | 42,550.79 | 42,341.28 | (0.49) | 39,281.37 | 42,544.80 | 8.31 |
| VII | 65,450.13 | 66,125.43 | 1.03 | 12,671.79 | 10,296.31 | (18.75) | 14,599.43 | 13,999.16 | (4.11) | 38,178.91 | 41,829.96 | 9.56 |
| VIII | 51,090.81 | 49,833.02 | (2.46) | 19,978.70 | 17,582.59 | (11.99) | 24,009.10 | 22,509.53 | (6.25) | 7,103.01 | 9,740.90 | 37.14 |
| IX | 186,655.01 | 172,666.31 | (7.49) | 63,307.69 | 41,597.92 | (34.29) | 36,579.13 | 33,840.45 | (7.49) | 86,768.19 | 97,227.94 | 12.05 |
| X | 36,960.55 | 35,558.38 | (3.79) | 10,370.96 | 9,039.70 | (12.84) | 10,844.87 | 9,984.18 | (7.94) | 15,744.72 | 16,534.50 | 5.02 |
| XI | 17,399.50 | 15,214.25 | (12.56) | 3,456.78 | 3,686.91 | 6.66 | 7,158.61 | 6,160.95 | (13.94) | 6,784.11 | 5,366.39 | (20.90) |
| XII | 74,611.84 | 61,252.78 | (17.90) | 56,695.51 | 41,164.84 | (27.39) | 11,051.20 | 11,905.77 | 7.73 | 6,865.13 | 8,182.17 | 19.18 |
| Caraga | 20,394.73 | 18,408.78 | (9.74) | 1,678.91 | 1,284.37 | (23.50) | 16,422.31 | 15,194.24 | (7.48) | 2,293.51 | 1,930.17 | (15.84) |
| ARMM | 288,747.85 | 299,795.02 | 3.83 | 23,216.21 | 22,479.09 | (3.18) | 26,040.59 | 27,834.34 | 6.89 | 239,491.05 | 249,481.59 | 4.17 |

P-Preliminary
Table 2. Commercial Fisheries: Volume of Fish Unloading by Region, by Type of Landing Center, Philippines, January - March 2010-2011 ${ }^{\text {P }}$

| Region | Commercial |  | \% <br> Change <br> 11/10 | Private |  | \% <br> Change <br> 11/10 | PFDA |  | \% <br> Change <br> 11/10 | LGU |  | \% <br> Change <br> 11/10 | Traditional |  | \% <br> Change <br> 11/10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2010 | 2011 |  | 2010 | 2011 |  | 2010 | 2011 |  | 2010 | 2011 |  | 2010 | 2011 |  |
| PHILIPPINES | 292,080.90 | 234,960.12 | (19.56) | 53,050.60 | 38,010.66 | (28.35) | 74,987.36 | 49,037.04 | (34.61) | 16,444.78 | 16,953.94 | 3.10 | 147,598.16 | 130,958.48 | (11.27) |
| NCR | 19,884.69 | 14,782.56 | (25.66) |  |  |  | 19,304.32 | 14,215.16 | (26.36) |  |  |  | 580.37 | 567.40 | (2.23) |
| CAR |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| I | 810.40 | 850.79 | 4.98 |  |  |  | 142.38 | 300.95 | 111.37 |  |  |  | 668.02 | 549.84 | (17.69) |
| II | 5,607.86 | 4,767.16 | (14.99) |  |  |  |  |  |  |  |  |  | 5,607.86 | 4,767.16 | (14.99) |
| III | 1,642.33 | 1,869.46 | 13.83 | 1,421.70 | 1,676.89 | 17.95 |  |  |  | 10.29 | 14.70 | 42.86 | 210.34 | 177.87 | (15.44) |
| IV-A | 23,365.71 | 18,887.83 | (19.16) |  |  |  | 5,526.05 | 2,300.91 | (58.36) | 1,906.75 | 1,825.22 | (4.28) | 15,932.91 | 14,761.70 | (7.35) |
| IV-B | 9,149.01 | 7,945.34 | (13.16) |  |  |  |  |  |  |  |  |  | 9,149.01 | 7,945.34 | (13.16) |
| V | 16,148.46 | 14,337.06 | (11.22) | 2,362.50 | 2,193.00 | (7.17) |  |  |  | 4,906.49 | 3,941.62 | (19.67) | 8,879.47 | 8,202.44 | (7.62) |
| VI | 24,095.89 | 24,388.19 | 1.21 | 911.06 | 1,079.23 | 18.46 | 452.09 | 1,253.10 | 177.18 | 5,210.00 | 5,203.00 | (0.13) | 17,522.74 | 16,852.86 | (3.82) |
| VII | 12,671.79 | 10,296.31 | (18.75) |  |  |  |  |  |  | 302.89 | 691.34 | 128.25 | 12,368.90 | 9,604.97 | (22.35) |
| VIII | 19,978.70 | 17,582.59 | (11.99) | 169.10 | 402.00 | 137.73 |  |  |  | 3.30 | 9.00 | 172.73 | 19,806.30 | 17,171.59 | (13.30) |
| IX | 63,307.69 | 41,597.92 | (34.29) | 37,929.51 | 21,059.54 | (44.48) | 3,384.68 | 1,440.28 | (57.45) | 1,361.42 | 2,698.33 | 98.20 | 20,632.08 | 16,399.77 | (20.51) |
| X | 10,370.96 | 9,039.70 | (12.84) |  |  |  |  |  |  | 948.11 | 909.68 | (4.05) | 9,422.85 | 8,130.02 | (13.72) |
| XI | 3,456.78 | 3,686.91 | 6.66 | 122.24 | 121.17 | (0.88) | 772.29 | 1,114.72 | 44.34 | 1,795.53 | 1,661.05 | (7.49) | 766.72 | 789.97 | 3.03 |
| XII | 56,695.51 | 41,164.84 | (27.39) | 10,134.49 | 11,478.83 | 13.26 | 45,405.55 | 28,411.92 | (37.43) |  |  |  | 1,155.47 | 1,274.09 | 10.27 |
| Caraga | 1,678.91 | 22,479.09 | 1,238.91 |  |  |  |  |  |  |  |  |  | 1,678.91 | 22,479.09 | 1,238.91 |
| ARMM | 23,216.21 | 1,284.37 | (94.47) |  |  |  |  |  |  |  |  |  | 23,216.21 | 1,284.37 | (94.47) |

P - Preliminary


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P - Preliminary
Table 4. Aquaculture Production by Type of Aquafarm, by Environment and by Region, January - March 2010-2011 ${ }^{\text { }}$


Table 5. Aquaculture: Milkfish Production of Top Producing Provinces by Culture Environment and Type of Aquafarm, Philippines, January - March 2010-2011 ${ }^{\text {P }}$
(Metric Tons)

| Culture Environment/ Type of Aquafarm/Province | 2010 | 2011 | $\begin{gathered} \hline \text { \% Change } \\ 11 / 10 \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| PHILIPPINES | 66,510.35 | 69,072.23 | 3.85 |
| Brackishwater Fishpond | 38,667.17 | 39,624.89 | 2.48 |
| Bulacan | 6,722.50 | 6,210.25 | (7.62) |
| Negros Occidental | 4,994.99 | 6,151.33 | 23.15 |
| Pampanga | 3,468.73 | 3,272.40 | (5.66) |
| Capiz | 2,626.39 | 2,804.45 | 6.78 |
| Pangasinan | 2,203.49 | 2,509.99 | 13.91 |
| Bataan | 2,518.86 | 2,456.64 | (2.47) |
| Other Provinces | 16,132.21 | 16,219.83 | 0.54 |
| Brackishwater Fish pen | 308.66 | 472.65 | 53.13 |
| La Union | 304.19 | 468.21 | 53.92 |
| Northern Samar | 2.91 | 2.71 | (6.87) |
| Other Provinces | 1.56 | 1.73 | 10.90 |
| Brackishwater Fish cage | 78.44 | 109.53 | 39.64 |
| Agusan del Norte | 55.31 | 90.97 | 64.47 |
| Northern Samar | 11.00 | 10.00 | (9.09) |
| Other Provinces | 12.13 | 8.56 | (29.43) |
| Freshwater Fish pen | 8,105.64 | 9,126.31 | 12.59 |
| Rizal | 6,199.87 | 6,591.70 | 6.32 |
| Sultan Kudarat | 1,724.13 | 2,265.69 | 31.41 |
| Maguindanao | 134.83 | 141.92 | 5.26 |
| Other Provinces* | 46.81 | 127.00 | 171.32 |
| Freshwater Fish cage | 815.86 | 851.78 | 4.40 |
| Batangas | 792.45 | 836.67 | 5.58 |
| Other Provinces | 23.41 | 15.11 | (35.45) |
| Marine Fish pen | 6,343.51 | 4,630.90 | (27.00) |
| Pangasinan | 3,358.23 | 2,435.05 | (27.49) |
| Davao del Sur | 2,641.04 | 1,870.38 | (29.18) |
| lloilo | 115.69 | 138.64 | 19.84 |
| Other Provinces | 228.55 | 186.83 | (18.25) |
| Marine Fish cage | 12,191.07 | 14,256.17 | 16.94 |
| Pangasinan | 8,572.60 | 10,292.27 | 20.06 |
| Davao del Sur | 1,222.90 | 896.75 | (26.67) |
| Davao del Norte | 392.37 | 598.16 | 52.45 |
| Zambales | 496.05 | 574.82 | 15.88 |
| Other Provinces | 1,507.15 | 1,894.17 | 25.68 |

Table 6. Aquaculture: Tilapia Production of Top Producing Provinces, by Culture Environment/Type of Aquafarm, Philippines, January - March 2010-2011 ${ }^{P}$
(Metric Tons)

| Culture Environment/ <br> Type of Aquafarm/Province | 2010 | 2011 | \% Change $11 / 10$ |
| :---: | :---: | :---: | :---: |
| PHILIPPINES | 93,328.10 | 90,298.41 | (3.25) |
| Brackishwater Fishpond | 2,979.17 | 3,037.49 | 1.96 |
| Pampanga | 964.25 | 936.96 | (2.83) |
| Zamboanga del Sur | 225.54 | 260.04 | 15.30 |
| Bulacan | 324.28 | 241.88 | (25.41) |
| Cagayan | 320.45 | 229.70 | (28.32) |
| Zamboanga Sibugay | 223.15 | 217.33 | (2.61) |
| Other Provinces | 921.51 | 1,151.58 | 24.97 |
| Brackishwater Fishcage/fishpen | 55.60 | 47.40 | (14.74) |
| La Union | 49.46 | 40.28 | (18.54) |
| Cagayan | 3.59 | 4.16 | 15.77 |
| llocos Norte | 2.28 | 2.69 | 17.86 |
| llocos Sur | 0.24 | 0.28 | 13.99 |
| Other provinces | 0.03 |  |  |
| Freshwater Fishpond* | 61,004.42 | 57,247.59 | (6.16) |
| Pampanga | 47,496.78 | 44,252.75 | (6.83) |
| Pangasinan | 3,280.13 | 4,140.01 | 26.21 |
| Tarlac | 2,236.39 | 1,788.66 | (20.02) |
| Nueva Ecija | 1,336.68 | 1,262.76 | (5.53) |
| Bulacan | 1,105.72 | 1,082.17 | (2.13) |
| Other Provinces | 5,548.72 | 4,721.24 | (14.91) |
| Freshwater Fish cage | 25,194.21 | 25,356.70 | 0.64 |
| Batangas | 19,923.91 | 20,356.26 | 2.17 |
| Laguna | 2,074.50 | 2,123.46 | 2.36 |
| Camarines Sur | 1,551.85 | 1,478.76 | (4.71) |
| South Cotobato | 803.11 | 660.48 | (17.76) |
| Ifugao | 252.05 | 245.82 | (2.47) |
| Other Provinces | 588.80 | 491.92 | (16.45) |
| Freshwater Fish pen | 4,087.51 | 4,609.23 | 12.76 |
| Rizal | 1,952.70 | 2,183.90 | 11.84 |
| Sultan Kudarat | 1,695.09 | 1,967.15 | 16.05 |
| Maguindanao | 362.21 | 374.82 | 3.48 |
| Laguna | 57.29 | 61.38 | 7.14 |
| Lanao del Sur | 11.93 | 12.19 | 2.19 |
| Other Provinces | 8.29 | 9.79 | 18.02 |
| Marine Fish Pen/Cage | 7.20 |  | - |
| Leyte | 7.00 |  |  |
| Other Provinces | 0.20 |  |  |
| Small Farm Reservoir | 20.36 | 26.89 | 32.13 |
| Quirino | 5.65 | 7.88 | 39.47 |
| Bulacan | 4.83 | 5.30 | 9.71 |
| North Cotabato | 0.04 | 4.00 | 9,900.00 |
| Bohol | 2.51 | 3.07 | 22.30 |
| Isabela | 2.37 | 1.43 | (39.56) |
| Other Provinces | 4.96 | 5.21 | 5.04 |

Table 7. Aquaculture: Tiger Prawn, Mud Crab, Carp and Catfish Production of Top Producing Provinces by Culture Environment and Type of Aquafarm, Philippines, January - March 2010-2011 ${ }^{\text {P }}$
(Metric Tons)

| Species/Province | 2010 | 2011 | $\begin{gathered} \text { \% Change } \\ 11 / 10 \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| TIGER PRAWN | 10,373.98 | 7,447.78 | (28.21) |
| Brackishwater Fishpond |  |  |  |
| Pampanga | 4,329.81 | 2,011.00 | (53.55) |
| Lanao del Norte | 1,765.07 | 1,861.27 | 5.45 |
| Zamboanga del Sur | 786.08 | 843.93 | 7.36 |
| Zamboanga Sibugay | 778.01 | 304.20 | (60.90) |
| Misamis Occidental | 404.66 | 465.04 | 14.92 |
| Other Provinces | 2,310.35 | 1,962.34 | (15.06) |
| MUD CRAB | 3,591.78 | 3,346.90 | (6.82) |
| Brackishwater Fishpond |  |  |  |
| Lanao del Norte | 1,257.96 | 1,397.09 | 11.06 |
| Sorsogon | 1,268.05 | 912.62 | (28.03) |
| Pampanga | 606.82 | 589.08 | (2.92) |
| Misamis Occidental | 86.04 | 91.10 | 5.88 |
| Camarines Norte | 65.00 | 74.14 | 14.07 |
| Other Provinces* | 307.91 | 282.88 | (8.13) |
| CARP | 664.58 | 703.60 | 5.87 |
| Freshwater Fishpond | 74.08 | 55.49 | (25.09) |
| Lanao del Norte | 12.76 | 6.53 | (48.82) |
| Quezon | 36.36 | 29.51 | (18.84) |
| Pampanga | 9.31 | 8.73 | (6.23) |
| Other Provinces | 15.66 | 10.72 | (31.55) |
| Freshwater Fish Pen/Cage | 587.15 | 640.14 | 9.02 |
| Rizal | 416.45 | 458.77 | 10.16 |
| Laguna | 166.28 | 172.42 | 3.69 |
| Manila |  | 5.86 |  |
| Other Provinces | 4.42 | 3.09 | (30.09) |
| Small Farm Reservoir | 2.95 | 7.97 | 170.17 |
| Quirino | 2.58 | 7.31 | 183.33 |
| Other Provinces | 0.37 | 0.66 | 78.38 |
| Rice Fish | 0.40 |  |  |
| Pangasinan | 0.40 |  |  |
| CATFISH | 609.21 | 870.46 | 42.88 |
| Freshwater Fishpond |  |  |  |
| lloilo | 174.78 | 375.79 | 115.00 |
| Nueva Ecija | 134.00 | 191.93 | 43.23 |
| Davao City | 72.93 | 83.76 | 14.85 |
| Laguna | 31.27 | 33.79 | 8.06 |
| South Cotabato | 28.24 | 33.89 | 20.01 |
| Other Provinces | 167.99 | 151.30 | (9.94) |

[^0]Table 8. Aquaculture: Mariculture Production by Species and by Province, Philippines, January - March 2010-2011 ${ }^{\text {P }}$
(Metric Tons)

| Species/Province | 2010 | 2011 | \% Change |
| :---: | :---: | :---: | :---: |
| Seaweed | 435,856.03 | 468,441.68 | 7.48 |
| Tawi-Tawi | 154,452.52 | 162,314.15 | 5.09 |
| Sulu | 62,185.85 | 63,752.93 | 2.52 |
| Bohol | 32,641.79 | 35,914.33 | 10.03 |
| Zamboanga Sibugay | 17,124.02 | 34,483.72 | 101.38 |
| Zamboanga del Norte | 30,203.11 | 28,881.58 | (4.38) |
| Other Provinces | 139,248.75 | 143,094.97 | 2.76 |
| Oyster | 5,093.13 | 5,228.17 | 2.65 |
| Bulacan | 2,232.21 | 2,281.32 | 2.20 |
| Capiz | 1,359.42 | 1,326.66 | (2.41) |
| Negros Occidental | 169.64 | 526.98 | 210.65 |
| Pangasinan | 282.26 | 279.53 | (0.97) |
| lloilo | 223.23 | 232.67 | 4.23 |
| Other Provinces | 826.37 | 581.02 | (29.69) |
| Mussel | 5,659.35 | 5,317.18 | (6.05) |
| Capiz | 3,126.19 | 3,106.84 | (0.62) |
| Samar | 791.00 | 904.03 | 14.29 |
| Bataan | 610.06 | 491.64 | (19.41) |
| Cavite | 264.10 | 372.38 | 41.00 |
| Aklan | 216.24 | 193.88 | (10.34) |
| Other Provinces | 651.76 | 248.41 | (61.89) |

[^1]Table 9. Producer, Wholesale and Retail Prices and Price Margins of Selected Aquaculture Fish Species,

| Species | Producer |  |  |  | Wholesale* |  |  |  | Retail |  |  |  | Price Margin |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2009 | 2010 | 2011 |  | 2009 | 2010 | 2011 |  | 2009 | 2010 | 2011 |  | Producer - Wholesale |  |  | Producer - Retail |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 2009 | 2010 | 2011 | 2009 | 2010 | 2011 |
| Milkfish | 80.62 | 83.98 | 81.48 | (2.98) | 97.28 | 98.77 | 91.17 | (7.69) | 116.48 | 117.26 | 112.49 | (4.07) | 16.66 | 14.79 | 9.69 | 35.86 | 33.28 | 31.01 |
| Tilapia | 70.02 | 60.37 | 61.63 | 2.09 | 68.90 | 68.85 | 76.36 | 10.91 | 86.20 | 86.91 | 92.79 | 6.77 | (1.12) | 8.48 | 14.73 | 16.18 | 26.54 | 31.16 |
| Tiger Prawn | 402.24 | 378.58 | 397.88 | 5.10 | 369.21 | 391.31 | 423.64 | 8.26 | 425.67 | 439.70 | 445.58 | 1.34 | (33.03) | 12.73 | 25.76 | 23.43 | 61.12 | 47.70 |
| Roundscad | 50.60 | 49.41 | 52.51 | 6.27 | 65.37 | 65.18 | 78.92 | 21.08 | 88.51 | 89.08 | 101.01 | 13.39 | 14.77 | 15.77 | 26.41 | 37.91 | 39.67 | 48.50 |
| Frigate Tuna | 57.97 | 56.56 | 61.82 | 9.30 | 75.92 | 80.67 | 83.44 | 3.43 | 93.51 | 95.19 | 100.17 | 5.23 | 17.95 | 24.11 | 21.62 | 35.54 | 38.63 | 38.35 |
| Indian Mackerel | 55.89 | 56.26 | 61.25 | 8.87 | 83.20 | 88.07 | 90.32 | 2.55 | 108.06 | 109.46 | 114.70 | 4.79 | 27.31 | 31.81 | 29.07 | 52.17 | 53.20 | 53.45 |

* BAS AMSAD data


[^0]:    P - Preliminary

    *     - Includes production from marine fishcage and marine fish pens.

[^1]:    P - Preliminary

