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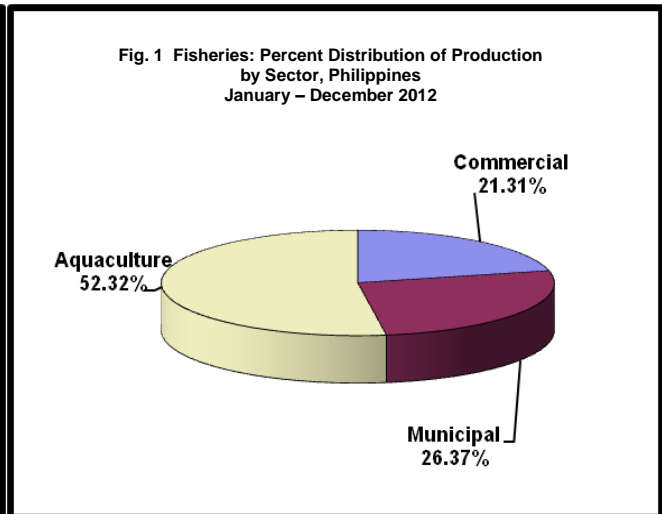
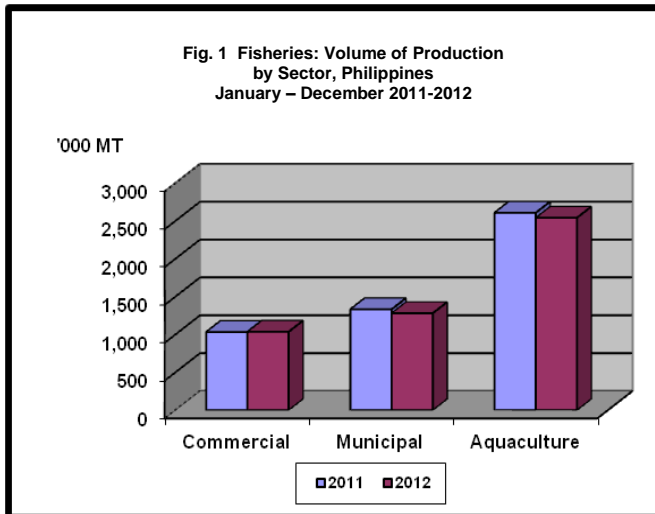
# FISHERIES SITUATIONER

January - December 2012



DEPARTMENT OF AGRICULTURE  
BUREAU OF AGRICULTURAL STATISTICS  
PHILIPPINES

# HIGHLIGHTS



The fisheries sector came down with 2.32 percent less output in 2012. From last year's record of 4,973,587.75 metric tons, the 2012 volume of production was placed at 4,858,097.10 metric tons. Municipal fisheries and aquaculture posted 3.88 percent and 2.54 percent reductions in their volumes of production, respectively. Commercial fisheries gained 0.23 percent in volume of production (Table 1).

Commercial fisheries production in 2012 reached 1,035,213.92 metric tons. This was 2,393.80 metric tons more than last year's record of 1,032,820.12 metric tons. Production declined by 9.12 percent in the first quarter and by 0.59 percent in the second quarter. However, these were offset by the increase of 4.68 percent during the third quarter and 6.39 percent in the fourth quarter of 2012. Five (5) regions fared well during the year while 11 regions recorded production shortfalls. SOCCSKSARGEN with a 20.05 percent or 35,058.18 metric tons production increment served as the major source of growth. This was largely attributed to the lifting of tuna fishing ban in the high seas last April 2012. Production in other regions were traced to reduced number of fishing days and trips due to rough seas brought about by the occurrence of typhoons in the second half of the year. SOCCSKSARGEN accounted for the bulk of commercial fish catch unloaded at 209,898.51 metric tons. Zamboanga Peninsula ranked second with total unloadings of 209,494.12 metric tons. Commercial fisheries contributed about 21.31 percent to the total fisheries production in 2012.

Municipal fishermen unloaded 1,280,917.79 metric tons of fish catch in 2012 and this was 51,730.00 metric tons lower than in 2011. The volume of fish unloaded by marine municipal fishing boats reached 1,083,495.31 metric tons which shared 84.59 percent in the total municipal fisheries output. It was noted that marine municipal fisheries production slid in all quarters of 2012, with the biggest cut recorded during the second quarter at 8.78 percent or 28,472.79 metric tons. The production shortfall was largely a result of reduced fishing operations and fishing trips due to rough seas brought by typhoons during the quarter. The volume of fish caught by inland municipal fishing households at 197,422.48 metric tons was 15.41 percent of the total municipal fisheries output. It recorded a production increment of 1.92 percent or 3,724.15 metric tons. The increase was traced to continuous dispersal of fingerlings by the Bureau of Fisheries and Aquatic Resources (BFAR) and frequent rains that filled up rivers, lakes, streams, creeks, swamps and dams. High water levels induced growth and proliferation of freshwater species. Inland municipal fisheries production grew from first to third quarter of 2012. However, it decreased by 0.63 percent during the fourth quarter. Production cuts was recorded in 14 regions. Municipal fisheries production accounted for 26.37 percent of the total fisheries production.

The volume of aquaculture production was estimated at 2,541,965.38 metric tons in 2012. Production was down by 2.54 percent or 66,154.46 metric tons from the 2011 level. Aquaculture production dropped in all quarters of 2012 and the biggest decrease was observed during the fourth quarter at 4.18 percent or 35,861.45 metric tons. Seaweed production at 1,751,070.64 contributed 68.89 percent to total aquaculture production. Production of seaweed declined by 4.88 percent or 89,762.22 metric tons in 2012. It exhibited a downward trend throughout the year and the biggest decrease was registered on the fourth quarter at 7.37 percent or 47,992.48 metric tons. Ice-ice disease was reported in top seaweed producing provinces. Fin fishes and shellfishes contributed 31.11 percent to the total aquaculture production. These included milkfish, tilapia, tiger prawn, oyster and mussel. Aquaculture accounted for 52.32 percent of the total fisheries production in 2012.

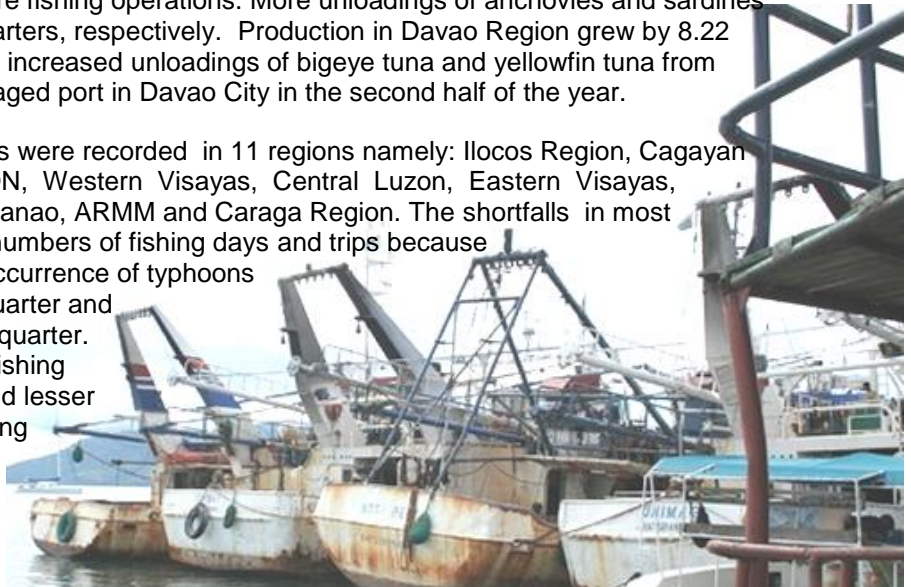
## COMMERCIAL FISHERIES

Commercial fishermen produced 0.23 percent more output in 2012 compared to the 2011 record. The volume of unloadings was estimated at 1,035,213.92 metric tons which was 2,393.80 metric tons higher than last year's production of 1,032,820.12 metric tons. Commercial fisheries production went down by 9.12 percent in the first quarter and by 0.59 percent in the second quarter. However, these production cuts were offset by the increase of 4.68 percent and 6.39 percent in the third and fourth quarters of the year, respectively.

The 20.05 percent growth in production in SOCCSKSARGEN greatly contributed to the increase in commercial fisheries production. This was the result of the lifting of tuna fishing ban in the high seas last April 2012. Production of skipjack increased from the second to the fourth quarter of 2012 and came up with 15.86 percent increase in 2012. Yellowfin tuna production was also increasing from second to fourth quarter quarter and registered 30.03 percent growth for the year. These were unloaded at the PFDA-managed port in General Santos City.

Increased production was also noted in the other four (4) regions, namely: National Capital Region (NCR), MIMAROPA, Bicol Region and Davao Region. NCR recorded a production increment of 4.86 percent or 3,432.67 metric tons in 2012. This was largely attributed to generally good weather conditions that enabled commercial fishermen to increase their number of fishing days and trips. MIMAROPA surpassed its last year's production by 1.75 percent or 770.19 metric tons as a result of more number of fishing days, trips and unloadings in most of the provinces due to good weather condition during the fourth quarter. Almost all of the commercial fishing vessels were in operation and more occurrence of some tuna-like species, anchovies and roundscad was observed. Bicol Region managed to outdo its last year's production by 1.73 percent or 1,196.04 metric tons as a result of more fishing operations. More unloadings of anchovies and sardines were recorded in the first and third quarters, respectively. Production in Davao Region grew by 8.22 percent or 1,138.82 metric tons due to increased unloadings of bigeye tuna and yellowfin tuna from foreign-flagged vessels in PFDA-managed port in Davao City in the second half of the year.

On the other hand, lower outputs were recorded in 11 regions namely: Ilocos Region, Cagayan Valley, Central Luzon, CALABARZON, Western Visayas, Central Luzon, Eastern Visayas, Zamboanga Peninsula, Northern Mindanao, ARMM and Caraga Region. The shortfalls in most regions were largely due to reduced numbers of fishing days and trips because of rough seas brought about by the occurrence of typhoons Gener, Helen and Lawin in the third quarter and typhoons Ofel and Pablo in the fourth quarter. Dry docking of some commercial fishing vessels for repair and maintenance and lesser fishing trips due to high cost of operating expenses were also reported.





SOCCSKSARGEN with 209,898.51 metric tons of unloadings accounted for the bulk of commercial fish catch unloaded in 2012. About 97.53 percent or 204,721.36 metric tons were unloaded at General Santos City landing centers of which 66.11 percent or 135,343.35 metric tons were unloaded at Philippine Fisheries Development Authority (PFDA)-managed landing centers. Zamboanga Peninsula ranked second with total volume of unloadings at 209,494.12 metric tons and 73.86 percent or 154,736.30 metric tons were unloaded at Zamboanga City landing centers. About 89.39 percent or 138,325.80 metric tons of fish catch in Zamboanga City were unloaded at private landing centers.

Except for the traditional landing centers which registered 8.03 percent or 41,622.57 metric tons less output in 2012, all types of landing centers recorded gains. However, 476,970.33 metric tons of fish were unloaded at traditional landing centers. The volume of fish catch unloaded at private landing centers grew by 5.48 percent or 11,973.38 metric tons. Unloadings at the ports managed by the PFDA recorded an increment of 9.56 percent or 20,092.59 metric tons. Unloadings at the Local Government Unit (LGU)-managed landing centers increased by 13.94 percent or 11,950.40 metric tons (Table 2).

## MUNICIPAL FISHERIES

Municipal fisheries production dropped by 3.88 percent in 2012 compared to 2011 level. The situation was reportedly a result of decreasing volume of fish catch in marine waters. On the other hand, inland municipal fisheries sustained a 1.92 percent growth in its yearly output.



The second quarter was the best time of the year for the sector. Combined production of marine and inland fisheries reached 337,466.99 metric tons. The biggest decline in municipal fish production of 7.52 percent happened on the same quarter of the year when most parts of the country experienced strong rains brought by Inter Tropical Convergence Zones (ITCZs), Low Pressure Areas (LPAs) and southwest monsoon (Habagat).

During the third quarter, municipal fisheries production was reduced by 1.50 percent. The occurrence of “habagat” and several typhoons greatly affected the daily fishing operations of sustenance fishermen. For several days, fishermen were warned not to take the risks of sailing out into the open sea, especially those operating light and non-motorized fishing boats. The rainy months of July, August and September caused marine fish production to slide in its lowest level for the year.

For the fourth quarter, typhoons Ofel and Pablo brought heavy rains in some parts of the Visayas and Mindanao regions. This resulted in a 2.86 percent drop in fish catch. The floodings in Mindanao, particularly in Compostela Valley and Davao Oriental, limited movements of fishermen. Similarly, municipal fishermen in some provinces of the Visayas regions encountered difficulties during those months. Luzon provinces, on the other hand, were spared from the wrath of typhoon Pablo and experienced only occasional rains. As a result, some provinces, like Pangasinan, Cagayan, Quezon, Palawan and Sorsogon, came up with increases in 2012. CAR, CALABARZON and Bicol Region, surpassed their previous year’s outputs.

Marine municipal fisheries production was cut by 55,454.15 metric tons. With the exception of Bicol Region, all other regions recorded reductions in volume of marine species unloaded. The deficit came mostly from MIMAROPA at 20,230.47 metric tons, Zamboanga Peninsula at 5,874.59 metric tons, Eastern Visayas at 5,007.58 metric tons, Ilocos Region at 4,396.52 metric tons and ARMM at 4,351.05 metric tons.

Palawan with 150,834.13 metric tons of unloading had the biggest share in the national marine municipal fisheries production. The next leading contributors to total marine municipal fisheries production in 2012 were Iloilo with 58,824.09 metric tons, Masbate with 46,360.42 metric tons, Zamboanga City with 40,756.59 metric tons, Surigao del Norte with 39,253.69 metric tons and Negros Occidental with 38,977.96 metric tons.

In 2012, the top five (5) marine municipal species were big-eyed scad (matang-baka), Indian sardines (tamban), roundscad (galonggong), frigate tuna (tulingan) and fimbriated sardines (tunsoy). The individual shares of these species ranged from four (4) to seven (7) percent.

The dwindling volume of catch of other common species like, Indian mackerel (alumahan), indo-pacific mackerel (hasa-hasa), anchovies (dilis), round herring (tulis), and blue crab (alimasag), was evident in the daily unloadings of fishermen. Also, fish catch was getting smaller in size and in number compared to previous years. Conflict between the commercial and municipal fisheries on the utilization of fishery resources continued to perturb the industry. The use of destructive fishing gears, pollution and other toxic substances thrown in waterways also affected the growth and natural reproduction of species.

Inland municipal fisheries showed improved performance in 2012 compared to 2011 with 1.92 percent growth. It was a better year for many provinces across the country. Rizal and Laguna provinces in CALABARZON continued to be the top gainers and contributed 44.30 percent to the total production. Other provinces like, Maguindanao, North Cotabato, Sultan Kudarat, Pampanga, Cagayan, Iloilo and Camarines Sur, where lakes, rivers, creeks, marshes, swamps, and other inland bodies of water exist also had their shares in the annual increase of 1.92 percent in production.

Tilapia, milkfish (bangus), carp, freshwater catfish (hito), mudfish (dalag), gourami and freshwater goby (biya) were the common species caught by inland fishermen. Taal Lake still produced a substantial amount of “tawilis” or freshwater sardines. Shrimps and crabs, as well as “ulang” or freshwater lobsters, were still visible in rivers. A big portion of inland fisheries production came from various species of gathered clams and shells from Laguna Lake. Abundance of natural food favored the different species that thrive in Laguna Lake (Table 3).

## AQUACULTURE

Aquaculture produced a total of 2.5 million metric tons in 2012. The volume of production was 2.54 percent lower than the previous year's level. The main source of this decrease were from seaweed. The rest of the aquafarm types showed better performance except for oyster and freshwater fish pens.

The reduced volume of harvests from ARMM, MIMAROPA and Zamboanga Peninsula led to the 3.77 percent decline in total production. Seaweed farms in these regions were affected by ice-ice disease. Low buying price of seaweed and weather disturbances that prevailed throughout the year forced some farmers to stop operation. The habitation of assorted fishes and sea turtles in seaweed farms was apparent in Sulu and Tawi-Tawi during the first quarter of the year.



Brackishwater fishponds had the highest increment in production mostly during the second half of the year. Increased harvest in CALABARZON was due to availability of fry, better water quality and adequate natural food, specifically in Quezon. Good weather condition and water salinity favored production from brackishwater fishponds in Central Luzon.

Output from marine fish cages was 7.93 percent more than last year's record. During the second quarter, bigger sizes of milkfish were harvested in Pangasinan as a result of good water salinity and better feeding management. Absence of fish kill and destructive typhoon benefited culture in marine cages in Ilocos Region. Initial harvests from additional fishcages in mariculture park in Sta. Maria, Davao del Sur contributed to the increase in third quarter harvests (Table 4).

The following table shows the percentage change in production by aquafarm type from 2011 to 2012.

Type of Aquafarm/Environment	% Increase (Decrease)
Brackishwater fishpond	2.92
Brackishwater fish pen	5.54
Brackishwater fish cage	2.92
Freshwater fishpond	1.13
Freshwater fish pen	(1.28)
Freshwater fish cage	2.27
Rice Fish	42.47
Small Farm Reservoir	38.84
Marine fish pen	10.78
Marine fish cage	7.93
Oyster	(3.79)
Mussel	14.34
Seaweed	(4.88)

## SELECTED AQUACULTURE SPECIES

### MILKFISH



Production of milkfish in 2012 went up by 3.80 percent, from 372,580.80 metric tons in 2011 to 386,728.92 metric tons this year. The increase was the result of good farm management, availability of quality fry/fingerling and proper feeding practices (Table 5).

Milkfish production from brackishwater fishponds and fish pens registered increases of 2.72 percent and 6.65 percent, respectively. Most producing provinces recorded bigger sizes of milkfish harvested. The great demand for cultured species, particularly by local cannery, hotels and other eatery establishments encouraged operators to stock quality fry/fingerlings and employ better aquafarm management. Meanwhile, harvests from brackishwater fish cages dropped by 2.76 percent. Operators reported high mortality rate, particularly, in San Fernando, La Union in the second half of the year due to the low water level brought about by siltation at the mouth of estuaries. Some areas in other provinces were affected by typhoons and southwest monsoon. Furthermore, there were cage operator who temporarily stopped operations due to insufficient funds.

Harvests of milkfish from freshwater fish pens and fish cages dropped by 2.01 percent. Batangas which was the major producing province of milkfish from freshwater fish cage recorded a 2.90 percent decline in production. This was attributed to the full implementation of dismantling of illegal fish cages in Taal Lake. Similarly, milkfish produced from freshwater fish pens in Sultan Kudarat and Maguindanao went down by 12.09 percent and 1.46 percent, respectively. Delayed stocking was reported in Sultan Kudarat due to continuous repairs of fishing nets and replacement of old bamboo poles. In Maguindanao, operators were not able to harvest milkfish of bigger sizes due to lack of feeds and other needed inputs because of financial constraints.

The combined 2012 production of milkfish from marine fish pens and fish cages at 112,690.27 metric tons was 8.40 percent higher than last year's level of 103,958.20 metric tons. Increases of harvests in Davao del Sur by 41.26 percent and in Zambales by 28.30 percent were attained with bigger sizes of species harvested, good farm management and proper feeding supervision. In Samar and Pangasinan, the production increases were attributed to the usage of quality fry/fingerling and better water condition.

## TILAPIA

The 2012 production of tilapia from all of aquafarms types was higher by 1.22 percent or 3,150.53 metric tons this year compared to last year's level. Tilapia production came mostly from freshwater environment. Production gains were observed in all types of aquafarms except freshwater fish pens (Table 6).



Harvest of tilapia from freshwater fishponds grew by 0.79 percent. The provinces that contributed to the increase were Tarlac and Isabela with production expanded by 14.10 percent and 7.55 percent, respectively. In Tarlac, favorable weather conditions during the first quarter and the availability of quality fingerlings during the year were reported. Bigger sizes of tilapia were harvested in Concepcion, Tarlac in the second quarter due to proper feeding and sufficient water supply from Paraoh River. In Isabela, rehabilitated fishponds in Cauayan and Alicia went back to operations during the third quarter of 2012. On the other hand, in



Pampanga, Pangasinan and Nueva Ecija production dropped by 1.22 percent, 8.11 percent and 1.32 percent, respectively. It was reported that some operators shifted to crop farming in Pampanga during the first quarter. The overflowing of fishponds brought about by typhoon Gener and monsoon rains (Habagat) during the third quarter of the year contributed to the contraction of harvest. In Pangasinan, the low water level resulted in smaller sizes of tilapia harvested during the first quarter. In Nueva Ecija the usage of poor quality fingerlings during the first quarter and fish kill in southern part of the province were observed. Extreme heat and unpredictable weather condition during the second quarter of the year was experienced in Nueva Ecija.

Production of tilapia harvested from freshwater fish cages registered an increase of 3.19 percent in 2012. This was contributed by major producing provinces of Batangas, Camarines Sur, Albay and Rizal. The usage of quality fingerlings was noted in these provinces. This was complemented with intensive feeding and favorable weather condition that resulted in bigger sizes of tilapia harvested during the year. There was high demand for freshwater species during the second and third quarters of the year because there was less supply of marine species that allowed farmers to increase their area. On the contrary, Laguna posted a drop of 1.77 percent because of fish kill during the second quarter. Some fish cages were not utilized due to insufficient capital. South monsoon rains during the third quarter of the year caused more fish cages to be submerged in water.

Production from freshwater fish pens at 21,379.50 metric tons was 888.73 metric tons lower than last year's production. Sultan Kudarat and Laguna contributed to the decrease with output cuts of 19.28 percent and 3.50 percent, respectively. In Sultan Kudarat, reduced stocking and lesser area utilized were reported during the third quarter of 2012. In Laguna financial constraints beset farmers during the second quarter. During the third quarter, some fish pens were submerged in water. Meanwhile, Rizal, Maguindanao and Davao del Norte came up with production increase of 1.95 percent, 2.41 percent and 17.77 percent, respectively. In Rizal, good weather condition and sufficient natural food from the Laguna de Bay enhanced the growth of tilapia thus, the bigger sizes of bulk during the fourth quarter. In Maguindanao and Davao del Norte, there was availability of fingerlings which encouraged resumption of tilapia culture by some operators.

Harvests from brackishwater fishponds went up by 1.32 percent this year. Production in Bulacan rose by 3.81 percent owing to the shifting from nursery operation to grow-out tilapia culture to meet the demand from the consumers. In Zamboanga del Sur, output gained by 0.52 percent was caused by sufficient supply of natural food that enhanced the growth of the species and fishponds which were previously under repair were now utilized. In Pangasinan, the 274.51 percent increase was attributed to the big sizes of tilapia harvested which resulted from improved feeding practices and good water parameter. Added to that was the high market demand for tilapia during Lenten season in the second quarter of 2012. On the contrary,



Pampanga and Cagayan registered production decreases of 2.08 percent and 2.58 percent, respectively. In Pampanga, there was a sudden change in water temperature resulting in high water salinity during the second quarter of the year. In Cagayan, overflowing of fishponds brought about by typhoon Gener and monsoon rains (Habagat) was reported.

Volume of harvests from brackishwater fish pen/cages increased by 8.68 percent. In Cagayan, the 3.87 percent increase was traced to bigger number of fish cages utilized to meet the high demand during Lenten season in the second quarter. In the Ilocos provinces, output gained was attributed to more stocking due to the availability of fingerlings. It was also noted that some milkfish operators shifted to tilapia culture during the second and third quarters of the year.



Production from rice fish farms went up by 42.27 percent in 2012. More tilapia fingerlings were stocked and harvested in Pampanga in the first quarter, while Pangasinan and Ilocos Norte during the fourth quarter was due to sufficient water level. In Iloilo, farmers were able to harvest more because of less predators during the first quarter of 2012.

Production of tilapia in small farm reservoirs (SFRs) posted an increase of 42.98 percent because of the combined harvests in Pampanga, Isabela and North Cotabato. The early onset of rainfall resulted in good water level in Pampanga. The sufficient water supply from irrigation and fingerlings dispersal of BFAR and LGU were noted in Isabela. In North Cotabato, there were more stocking because of sufficient water brought by frequent rains. On the other hand, the production drop in Bohol was due to the stunted growth of tilapia because of degeneration of old stocks. Farmers in Quirino shifted from tilapia to carp culture to meet market demand.

There was an increase of 247.57 percent in marine fish cages in 2012. The output gain was brought about by the new venture of saline tilapia in Panabo, Davao del Norte during the first quarter of 2012.

## TIGER PRAWN

Total tiger prawn production for 2012 was estimated at 48,196.44 metric tons. This was 1.48 percent higher than the 2011 record (Table 7). The biggest output increase of 17.40 percent was observed in Lanao del Norte and this was traced to the impact of commercial feeds used and the intense stocking in response to high demand for tiger prawn for export. Local market demand for tiger prawn was also high because of the triple activities (Regional Palarong Pambansa, Boy/Girl Scouts Jamboree and Motorcross) done in Tubod, Lanao del Norte. In Misamis Occidental, the 7.62 production increment was attributed to more ponds operated in Tangub City and in the municipality of Bonifacio. In Bulacan, the production increase was the result of good salinity of water.



Meanwhile, the 1.28 percent production decrease in Pampanga was due to low stocking caused by sudden change of temperature and reduction of area utilized because of financial constraints. In Zamboanga del Sur, the 0.33 percent drop in production was due to low survival rate which led operators to harvest early.

In other provinces, the drop in production was the effect of low quality of post larvae and fish kills caused by abnormal water condition.



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## MUD CRAB



The 2012 production of mud crab at 16,359.63 metric tons was up by 4.00 percent compared to last year's production of 15,730.91 metric tons (Table 7).

The increase was attained due to shifting of milkfish (bangus) to mud crab culture in Lanao del Norte because of high demand and good price in the market. In Capiz and Misamis Occidental, the availability of quality crablets and the high demand for local and export markets encouraged mud crab growers to stock more. In other provinces, the increase of 3.75 percent was attributed to less incidence of white spot syndrome.

On the other hand, Pampanga, which was the top producer of mud crab, recorded a 3.12 percent decrease in production. Stocking rate was low because of poor quality of crablets and low salinity of water resulting from heavy rains during the previous quarters. In Sorsogon, the 27.84 percent output reduction was due to scarcity of crablets and frequent rains in the area.

## CARP



Production of carp in 2012 was 17,703.89 metric tons. This was 2.09 percent more than the 2011 output. Rizal, the top producing province, reported a 2.50 percent increment in production. There was good growth of carps in fish pens and fish cages in Rizal in 2012 and the biggest volume produced was on the fourth quarter when fingerlings stocked were of good quality and growth of stocks was enhanced by the abundance of natural food in Laguna Lake. Tarlac produced more carps in 2012 at 146.56 metric tons. This was 23.84 percent higher than its 2011 level. Carps harvested were natural entries from fishponds. Production was notably bigger during the fourth quarter of the year. In Pampanga, carp production of 84.57 metric tons in 2012 came from fishponds, rice fish farms and small farm reservoirs (SFRs). Production in fishponds in Pampanga was higher in the last quarter but it was down from first to third quarter of 2012. Good pond water salinity and quality fingerlings stocked accounted for the increase. Moreover, the early onset of rains on second quarter accounted for the entries of carps in SFRs in Pampanga. This was the first and only harvest in 2012 and there was none in 2011. Farmers in Pampanga produced carps from rice fish farms during the first quarter only. Meanwhile, Metro Manila's fish cage production of carps managed a 0.07 percent increase. Only two quarters of that year had volume increments as a consequence of quality fingerlings stocked and abundance of natural food (Table 7).

Production in Laguna and Lanao del Norte went down in 2012 from their 2011 levels. All quarterly production from fish pens and fish cages in Laguna and fishponds in Lanao del Norte declined. On the fourth quarter, specifically, the effect of Habagat prompted operators in Laguna to move harvest to the first quarter of 2013. In Lanao del Norte, there were three (3) operators who temporarily stopped operations due to financial constraints. Production decreases in other producing provinces of carp were due to less or no natural entries in fishponds, lack of capital to operate and re-zoning of fish cages (Table 7).

## CATFISH



Catfish production in 2012 was 3,606.42 metric tons or 15.26 percent higher than the 2011 level. Iloilo, the top catfish producing province, had 11.53 percent more harvest this year. The increasing demand from restaurants and eateries along the highway of Zarraga encouraged farmers to expand their area for catfish culture. Furthermore, robust harvest was attained through proper feed management. The combined output gains in Central Luzon provinces were realized with the early onset of rainfall, good management and proper feeding that enhanced the growth of catfish. Meanwhile, production in

Davao City went up due to availability of fingerlings and shifting from tilapia to catfish culture during the fourth quarter (Table 7).

Harvests of catfish from small farm reservoirs (SFRs) decreased by 6.90 percent due to overflowing of fish ponds in Cagayan brought by continuous rains and limited supply of fingerlings. Meanwhile, the 36.33 percent production increase of catfish from rice fish was from natural entry (Table 7).

## SEAWEED



Seaweed production at 1,751,070.64 metric tons was 4.88 percent lower than last year's record. The top producing provinces suffered infestation of ice-ice disease throughout the year. The unfavorable weather conditions combined with strong winds and rough seas brought negative effects on seaweed production in Tawi Tawi and Sulu. The uncontrolled presence of sea turtle and siganid fry in the area during the first half of 2012 caused damages and destroyed seaweed plants. In Zamboanga Sibugay, scarcity of good planting materials was noted. There were reports that most of the seaweed farms were washed out and covered with silt deposits caused by flash floods. The sudden change of temperature and existence of sea grass negated production output of Palawan. Meanwhile in Bohol, many operators opted to temporarily stop seaweed culture due to high cost of farming materials and the continuous drop of its buying price. The presence of epiphytes in the seaweed farms caused poor growth of the plant thus reducing production output (Table 8).

## OYSTER



Oyster production dropped by 3.79 percent in 2012. The biggest production cut of 69.16 percent in Pangasinan was the result of prohibition on gathering shellfishes because of red tide contamination. Another reason was the removal of oyster beds, specifically, along Agno River during the second quarter due to unavailability of oyster spats. On the other hand, production in Cavite, Negros Occidental and Iloilo went up by 43.48 percent, 29.55 percent and 26.32 percent, respectively. This was attributed to availability of quality spats that produced bigger sizes of oyster harvested. Favorable weather conditions and absence of red tide in these areas enabled farmers to plant more to sustain the demand from traders. Increases in area harvested and better prices offered were also observed in Capiz and Bulacan (Table 8).

## MUSSEL



Mussel production maintained its upward trend and recorded another 14.34 percent growth in 2012. Increases in the number of operators and area harvested were reported in Samar because of high demand and presence of buyers from Mindanao areas. The adoption of the string line technology in planting mussels was also noted. The absence of red tide with good water condition resulted in occurrence of quality spats in Cavite, allowed operators to plant more which resulted in bigger sizes of mussels harvested. On the contrary, a 71.48 percent production cut was recorded in Negros Occidental and this was reportedly the effects of re-zoning and clearing of illegal structures in Himamaylan City during the last half of the year. A production decline of almost 30 percent was reported in Bataan. This was due to unfavorable weather conditions and poor water quality which discouraged some farmers to plant more. Smaller sizes of mussels harvested in Pangasinan were noted due to attachment of non edible shells that affected the growth of mussels during the fourth quarter. Red tide contamination in the province was also declared during the first and third quarters that reduced mussel production during the year (Table 8).

Table 1. Fisheries: Volume of Fish Production by Sector, by Region, Philippines, January - December 2011 - 2012<sup>P</sup>

Region/ Sub-Sector	Fisheries		% Change	Commercial		% Change	Municipal		% Change	Aquaculture		% Change
	2011	2012		2011	2012		2011	2012		2011	2012	
<b>PHILIPPINES</b>	<b>4,973,587.75</b>	<b>4,858,097.10</b>	<b>(2.32)</b>	<b>1,032,820.12</b>	<b>1,035,213.92</b>	<b>0.23</b>	<b>1,332,647.79</b>	<b>1,280,917.79</b>	<b>(3.88)</b>	<b>2,608,119.84</b>	<b>2,541,965.38</b>	<b>(2.54)</b>
	-metric tons-											
NCR	80,014.64	83,069.12	3.82	70,684.64	74,117.31	4.86	6,620.98	6,148.02	(7.14)	2,709.02	2,803.79	3.50
CAR	3,659.60	3,777.65	3.23				983.42	1,035.74	5.32	2,676.18	2,741.91	2.46
I	150,264.92	145,544.38	(3.14)	3,556.45	2,648.65	(25.53)	39,146.31	33,987.70	(13.18)	107,562.16	108,908.03	1.25
II	64,875.55	60,062.73	(7.42)	16,049.93	12,976.91	(19.15)	34,752.46	32,224.61	(7.27)	14,073.16	14,861.21	5.60
III	258,966.91	259,399.28	0.17	4,548.99	3,370.10	(25.92)	42,047.05	40,374.37	(3.98)	212,370.87	215,654.81	1.55
IV-A	402,894.98	408,141.53	1.30	73,103.10	69,158.29	(5.40)	124,549.17	127,018.89	1.98	205,242.71	211,964.35	3.27
IV-B	728,972.45	685,647.55	(5.94)	44,079.53	44,849.72	1.75	196,042.31	175,855.09	(10.30)	488,850.61	464,942.74	(4.89)
V	289,007.40	295,312.49	2.18	68,972.70	70,168.74	1.73	143,711.93	145,111.09	0.97	76,322.77	80,032.66	4.86
VI	450,886.17	439,707.18	(2.48)	103,808.69	94,621.33	(8.85)	167,227.67	165,855.11	(0.82)	179,849.81	179,230.74	(0.34)
VII	240,073.33	236,360.32	(1.55)	39,836.61	38,982.98	(2.14)	53,010.45	51,863.49	(2.16)	147,226.27	145,513.85	(1.16)
VIII	209,777.74	200,417.52	(4.46)	61,228.67	53,084.41	(13.30)	98,212.04	92,806.99	(5.50)	50,337.03	54,526.12	8.32
IX	619,556.98	598,669.67	(3.37)	214,436.45	209,494.12	(2.30)	129,037.87	123,155.28	(4.56)	276,082.66	266,020.27	(3.64)
X	156,385.71	153,644.20	(1.75)	39,853.61	36,205.35	(9.15)	43,128.28	42,073.26	(2.45)	73,403.82	75,365.59	2.67
XI	64,249.59	67,468.48	5.01	13,858.49	14,997.31	8.22	24,260.63	20,871.05	(13.97)	26,130.47	31,600.12	20.93
XII	248,529.38	281,876.64	13.42	174,840.33	209,898.51	20.05	47,668.61	47,199.47	(0.98)	26,020.44	24,778.66	(4.77)
Caraga	96,152.48	93,766.45	(2.48)	6,064.74	5,199.37	(14.27)	66,600.69	64,098.26	(3.76)	23,487.05	24,468.82	4.18
ARMM	909,319.92	845,231.90	(7.05)	97,897.19	95,440.82	(2.51)	115,647.92	111,239.37	(3.81)	695,774.81	638,551.71	(8.22)

P - Preliminary



Table 2. Commercial Fisheries: Volume of Fish Unloading by Type of Landing Center and by Region, Philippines, January - December 2011 - 2012<sup>P</sup>

Region	Commercial		% Change	Private		% Change	PFDA		% Change	LGU		% Change	Traditional		% Change
	2011	2012		2011	2012		2011	2012		2011	2012		2011	2012	
<b>PHILIPPINES</b>	<b>1,032,820.12</b>	<b>1,035,213.92</b>	<b>0.23</b>	<b>218,425.93</b>	<b>230,399.31</b>	<b>5.48</b>	<b>210,070.35</b>	<b>230,162.94</b>	<b>9.56</b>	<b>85,730.94</b>	<b>97,681.34</b>	<b>13.94</b>	<b>518,592.90</b>	<b>476,970.33</b>	<b>(8.03)</b>
NCR	70,684.64	74,117.31	4.86				67,673.18	70,923.60	4.80				3,011.46	3,193.71	6.05
CAR															
I	3,556.45	2,648.65	(25.53)				879.27	503.11	(42.78)				2,677.18	2,145.54	(19.86)
II	16,049.93	12,976.91	(19.15)										16,049.93	12,976.91	(19.15)
III	4,548.99	3,370.10	(25.92)										760.55	619.26	(18.58)
IV-A	73,103.10	69,158.29	(5.40)	3,684.09	2,653.54	(27.97)	11,665.43	10,208.27	(12.49)	104.35	97.30	(6.76)	53,526.36	51,289.31	(4.18)
IV-B	44,079.53	44,849.72	1.75		566.58					7,911.31	7,094.13	(10.33)	44,079.53	44,849.72	1.75
V	68,972.70	70,168.74	1.73	11,269.00	11,110.95	(1.40)				19,332.07	19,874.43	2.81	38,371.63	39,183.36	2.12
VI	103,808.89	94,621.33	(8.85)	4,865.00	4,606.77	(5.31)	5,374.28	3,583.00	(33.33)	24,604.65	23,616.21	(4.02)	68,964.76	62,815.35	(8.92)
VII	39,836.61	38,982.98	(2.14)							2,982.89	2,996.66	0.13	36,843.72	35,986.32	(2.33)
VIII	61,228.67	53,084.41	(13.30)	1,209.17	1,236.18	2.23				19.90	20.45	2.76	59,999.60	51,827.78	(13.62)
IX	214,436.45	209,494.12	(2.30)	139,606.65	139,446.57	(0.11)	8,170.82	6,553.67	(19.79)	16,392.33	29,157.17	77.87	50,266.65	34,336.71	(31.69)
X	39,853.61	36,205.35	(9.15)							8,431.26	7,080.82	(16.02)	31,422.35	29,124.53	(7.31)
XI	13,858.49	14,997.31	8.22	1,097.80	1,400.71	27.59	3,255.89	3,047.94	(6.39)	5,942.18	7,744.17	30.33	3,562.62	2,804.49	(21.28)
XII	174,840.33	209,898.51	20.05	56,694.22	69,378.01	22.37	113,051.48	135,343.35	19.72				5,094.63	5,177.15	1.62
Caraga	6,064.74	5,199.37	(14.27)										6,064.74	5,199.37	(14.27)
ARMM	97,897.19	95,440.82	(2.51)										97,897.19	95,440.82	(2.51)

P - Preliminary

Table 3. Municipal Fish Production by Region, Philippines, January - December 2011 - 2012<sup>P</sup>

Region	Municipal		% Change	Marine		% Change	Inland		% Change
	2011	2012		2011	2012		2011	2012	
<b>PHILIPPINES</b>	<b>1,332,647.79</b>	<b>1,280,917.79</b>	<b>(3.88)</b>	<b>1,138,949.46</b>	<b>1,083,495.31</b>	<b>(4.87)</b>	<b>193,698.33</b>	<b>197,422.48</b>	<b>1.92</b>
	-metric tons-								
NCR	6,620.98	6,148.02	(7.14)	6,620.98	6,148.02	(7.14)	983.42	1,035.74	5.32
CAR	983.42	1,035.74	5.32	36,246.43	31,849.91	(12.13)	2,899.88	2,137.79	(26.28)
I	39,146.31	33,987.70	(13.18)	22,157.14	18,916.62	(14.63)	12,595.32	13,307.99	5.66
II	34,752.46	32,224.61	(7.27)	29,672.78	27,766.09	(6.43)	12,374.27	12,608.28	1.89
III	42,047.05	40,374.37	(3.98)	36,595.38	36,567.40	(0.08)	87,953.79	90,451.49	2.84
IV-A	124,549.17	127,018.89	1.98	195,128.77	174,898.30	(10.37)	913.54	956.79	4.73
IV-B	196,042.31	175,855.09	(10.30)	137,716.63	138,752.03	0.75	5,995.30	6,359.06	6.07
V	143,711.93	145,111.09	0.97	158,937.88	156,614.21	(1.46)	8,289.79	9,240.90	11.47
VI	167,227.67	165,855.11	(0.82)	52,816.90	51,659.23	(2.19)	193.55	204.26	5.53
VII	53,010.45	51,863.49	(2.16)	96,869.40	91,861.82	(5.17)	1,342.64	945.17	(29.60)
VIII	98,212.04	92,806.99	(5.50)	128,110.96	122,236.37	(4.59)	926.91	918.91	(0.86)
IX	129,037.87	123,155.28	(4.56)	39,013.49	38,089.42	(2.37)	4,114.79	3,983.84	(3.18)
X	43,128.28	42,073.26	(2.45)	24,067.39	20,608.16	(14.37)	193.24	262.89	36.04
XI	24,260.63	20,871.05	(13.97)	21,468.38	21,014.36	(2.11)	26,200.23	26,185.11	(0.06)
XII	47,668.61	47,199.47	(0.98)	62,337.76	59,675.23	(4.27)	4,262.93	24,401.23	472.41
Caraga	66,600.69	84,076.46	26.24	91,189.19	86,838.14	(4.77)	24,458.73	4,423.03	(81.92)
ARMM	115,647.92	91,261.17	(21.09)						

P - Preliminary

Table 4. Aquaculture Production by Type of Aquafarm, by Environment and by Region, Philippines, January - December 2011 - 2012<sup>P</sup>

Region	Aquaculture		% Change	Brackishwater Fishpond		% Change	Brackishwater Fish Pen		% Change	Brackishwater Fish Cage		% Change	Freshwater Fish Pond		% Change	Freshwater Fish Pen		% Change	Freshwater Fish Cage		% Change
	2011	2012		2011	2012		2011	2012		2011	2012		2011	2012		2011	2012		2011	2012	
<b>PHILIPPINES</b>	<b>2,608,119.84</b>	<b>2,541,965.39</b>	<b>(2.54)</b>	<b>309,462.02</b>	<b>318,502.11</b>	<b>2.92</b>	<b>831.74</b>	<b>877.84</b>	<b>5.54</b>	<b>804.23</b>	<b>827.68</b>	<b>2.92</b>	<b>142,645.08</b>	<b>144,261.17</b>	<b>1.13</b>	<b>65,537.65</b>	<b>64,695.67</b>	<b>(1.28)</b>	<b>98,451.58</b>	<b>100,682.16</b>	<b>2.27</b>
NCR	2,709.02	2,803.79	3.50	801.90	911.61	13.68	-	-	-	-	-	-	-	-	-	-	-	474.90	473.97	(0.20)	
CAR	2,676.18	2,741.91	2.46	19,865.31	21,125.29	6.34	787.05	825.23	4.85	230.06	205.17	(10.82)	1,765.17	1,826.09	3.45	0.08	0.13	67.14	911.01	915.82	0.53
I	107,562.16	108,908.03	1.25	3,167.48	3,622.36	14.36	88,625.28	90,816.47	2.47	108.59	121.47	11.86	7,985.34	8,934.87	11.89	0.25	-	-	266.58	382.16	43.36
II	14,073.16	14,861.21	5.60	15,072.01	18,572.33	23.22	4,588.91	5,118.59	11.54	0.57	0.74	30.19	113,530.44	113,099.48	(0.38)	-	-	-	0.93	39.32	4,112.25
III	212,370.87	215,654.81	1.55	4,588.91	5,118.59	11.54	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	87,244.31	89,166.87	2.20
IV-A	205,242.71	211,964.35	3.27	4,588.91	5,118.59	11.54	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	-	-	-
IV-B	488,850.61	464,942.74	(4.89)	8,007.46	8,393.49	4.82	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	-	-	-
V	76,322.77	80,032.66	4.86	8,007.46	8,393.49	4.82	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	-	-	-
VI	179,849.81	179,230.74	(0.34)	8,007.46	8,393.49	4.82	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	-	-	-
VII	147,226.27	145,513.85	(1.16)	8,007.46	8,393.49	4.82	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	-	-	-
VIII	50,337.03	54,526.12	8.32	8,007.46	8,393.49	4.82	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	-	-	-
IX	276,082.66	266,020.27	(3.64)	8,007.46	8,393.49	4.82	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	-	-	-
X	73,403.82	75,965.59	2.67	8,007.46	8,393.49	4.82	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	-	-	-
XI	26,130.47	31,600.12	20.93	8,007.46	8,393.49	4.82	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	-	-	-
XII	26,020.44	24,778.66	(4.77)	8,007.46	8,393.49	4.82	8,007.46	8,393.49	4.82	-	-	-	1,344.33	1,291.40	(3.94)	-	-	-	-	-	-
Caraga	23,487.05	24,468.82	4.18	2,142.20	2,194.33	2.43	2.32	2.90	24.82	-	-	-	144.94	136.00	(6.17)	-	-	-	153,777	1,488.11	(3.23)
ARMM	695,774.81	638,551.71	(8.22)	3,703.86	3,567.86	(3.67)	3,703.86	3,567.86	(3.67)	-	-	-	217.61	218.20	0.27	-	-	-	5,042.49	5,113.42	1.41
<b>PHILIPPINES</b>	<b>21,572.67</b>	<b>23,899.07</b>	<b>10.78</b>	<b>83,779.49</b>	<b>90,424.59</b>	<b>7.93</b>	<b>21,461.82</b>	<b>20,648.37</b>	<b>(3.79)</b>	<b>22,442.71</b>	<b>25,660.44</b>	<b>14.34</b>	<b>1,840,832.86</b>	<b>1,751,070.64</b>	<b>(4.88)</b>	<b>52.92</b>	<b>75.40</b>	<b>42.47</b>	<b>245.06</b>	<b>340.25</b>	<b>38.84</b>
NCR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CAR	11,305.72	12,298.48	8.78	60,838.56	63,514.98	4.40	4,268.04	1,532.83	(64.09)	256.01	263.27	2.84	195.74	69.04	(64.73)	2.72	3.78	38.72	15.42	14.98	(2.81)
I	-	-	-	0.28	0.28	0.00	617.83	547.66	(11.37)	791.07	728.03	(7.97)	1,798.71	1,138.77	(66.69)	46.60	69.12	48.31	128.95	114.02	(11.17)
II	-	-	-	3,366.37	4,305.95	27.91	4,508.65	4,952.35	9.84	1,438.28	1,007.08	(29.92)	789.34	1,195.53	51.46	-	-	-	64.72	168.61	160.50
III	-	-	-	0.67	0.46	(31.83)	895.78	1,428.59	43.46	6,433.94	8,060.86	25.26	46,632.17	45,151.03	(3.63)	-	-	-	-	-	-
IV-A	-	-	-	442.81	621.12	40.27	4.05	4.05	0.00	12.17	272.07	2,136.32	483,190.81	456,827.52	(3.10)	-	-	-	-	-	-
IV-B	199.31	188.06	(5.64)	22.78	22.47	(1.35)	9,623.50	10,865.18	12.90	9,000.71	8,508.76	(5.47)	58,841.98	51,503.50	(4.52)	-	-	-	-	-	-
V	921.93	962.90	4.34	205.76	228.46	11.02	720.27	743.62	3.24	12.17	272.07	2,136.32	172,865.00	171,712.47	(1.56)	-	-	-	5.04	1.59	(68.45)
VII	35.71	35.42	(0.82)	4,387.87	565.01	28.74	4,387.87	4,387.87	0.00	4,508.10	6,809.70	51.05	137,871.47	136,159.08	(1.24)	-	-	-	11.35	10.09	(11.11)
VIII	42.46	18.20	(57.14)	4,807.50	4,606.07	(4.19)	483.20	468.2	(3.17)	0.83	9.77	1,076.75	31,939.63	34,172.07	6.99	-	-	-	-	-	-
IX	-	-	-	115.78	94.84	(18.09)	382.20	226.78	(40.66)	-	-	-	254,521.10	246,304.31	(3.23)	-	-	-	-	-	-
X	-	-	-	2,315.38	2,315.38	0.00	1,06	1.79	68.58	-	-	-	42,618.67	42,053.33	(1.33)	-	-	-	1.52	1.47	(3.34)
XI	9,043.84	10,776.44	19.16	8,306.30	11,070.45	33.28	292.10	302.84	3.68	-	-	-	2,067.17	1,937.17	(6.29)	-	-	-	18.65	29.49	68.10
XII	21.89	17.68	(19.24)	2,454.34	2,887.45	9.50	-	-	-	-	-	-	448.95	506.80	12.89	-	-	-	-	-	-
Caraga	1.81	1.90	5.10	105.11	34.58	(67.10)	-	-	-	-	-	-	20,401.58	21,296.59	4.39	-	-	-	-	-	-
ARMM	-	-	-	-	-	-	-	-	-	-	-	-	686,450.54	629,363.41	(8.32)	-	-	-	-	-	-

P - Preliminary



**Table 5. Aquaculture: Milkfish Production of Top Producing Provinces by Culture Environment and Type of Aquafarm, Philippines, January - December 2010 - 2011<sup>F</sup>**

Culture Environment/ Type of Aquafarm/Province	2011	2012	% Change
- metric tons-			
<b>PHILIPPINES</b>	<b>372,580.80</b>	<b>386,728.92</b>	<b>3.80</b>
<b>Brackishwater Fishpond</b>	<b>224,934.08</b>	<b>231,044.15</b>	<b>2.72</b>
Capiz	25,110.87	26,234.40	4.47
Bulacan	23,019.66	24,737.44	7.46
Negros Occidental	22,012.52	23,171.12	5.26
Iloilo	24,744.00	21,625.76	(12.60)
Pampanga	19,318.47	19,128.97	(0.98)
Quezon	14,147.80	16,978.99	20.01
Other Provinces	96,580.76	99,167.48	2.68
<b>Brackishwater Fish pen</b>	<b>783.35</b>	<b>835.44</b>	<b>6.65</b>
La Union	739.45	784.24	6.06
Aklan	28.34	35.29	24.49
Other Provinces	15.55	15.92	2.33
<b>Brackishwater Fish cage</b>	<b>652.92</b>	<b>634.89</b>	<b>(2.76)</b>
Agusan del Norte	333.49	376.22	12.81
La Union	173.62	126.26	(27.28)
Davao del Norte	56.48	54.48	(3.54)
Other Provinces	89.33	77.93	(12.76)
<b>Freshwater Fish pen</b>	<b>28,086.96</b>	<b>27,768.28</b>	<b>(1.13)</b>
Rizal	19,642.08	20,061.63	2.14
Sultan Kudarat	5,770.90	5,073.29	(12.09)
Maguindanao	1,285.16	1,266.39	(1.46)
Other Provinces *	1,388.82	1,366.97	(1.57)
<b>Freshwater Fish cage</b>	<b>14,165.29</b>	<b>13,755.89</b>	<b>(2.89)</b>
Batangas	14,104.82	13,695.69	(2.90)
Other Provinces	60.47	60.20	(0.45)
<b>Marine Fish pen</b>	<b>21,535.84</b>	<b>23,878.86</b>	<b>10.88</b>
Pangasinan	11,305.72	12,298.48	8.78
Davao del Sur	9,042.28	10,772.25	19.13
Iloilo	309.89	255.29	(17.62)
Capiz	309.11	197.83	(36.00)
Other Provinces	568.84	355.00	(37.59)
<b>Marine Fish cage</b>	<b>82,422.36</b>	<b>88,811.41</b>	<b>7.75</b>
Pangasinan	60,644.67	63,324.84	4.42
Davao Sur	6,272.28	8,860.36	41.26
Zambales	3,356.13	4,305.95	28.30
Samar	2,017.98	2,266.52	12.32
Other Provinces	10,131.29	10,053.74	(0.77)

\* - Included data on freshwater fishpond

**Table 6. Aquaculture: Tilapia Production of Top Producing Provinces, by Culture Environment and Type of Aquafarm, Philippines, January - December 2011 - 2012<sup>P</sup>**

<b>Culture Environment/ Type of Aquafarm/Province</b>	<b>2011</b>	<b>2012</b>	<b>% Change</b>
- metric tons-			
<b>PHILIPPINES</b>	<b>257,385.44</b>	<b>260,535.67</b>	<b>1.22</b>
<b>Brackishwater Fishpond</b>	<b>14,194.26</b>	<b>14,381.27</b>	<b>1.32</b>
Pampanga	4,572.56	4,477.38	(2.08)
Cagayan	2,355.32	2,294.45	(2.58)
Bulacan	1,332.55	1,383.36	3.81
Zamboanga del Sur	960.58	965.52	0.52
Pangasinan	250.68	938.84	274.51
Other provinces	4,722.57	4,321.72	(8.49)
<b>Brackishwater FishPen/Cage</b>	<b>134.52</b>	<b>146.19</b>	<b>8.68</b>
Cagayan	69.98	72.69	3.87
La Union	46.57	41.52	(10.84)
Ilocos Norte	14.95	27.63	84.85
Ilocos Sur	2.61	2.80	7.48
Other provinces	0.42	1.55	269.93
<b>Freshwater Fishpond</b>	<b>138,010.22</b>	<b>139,105.16</b>	<b>0.79</b>
Pampanga	97,680.60	96,486.97	(1.22)
Pangasinan	8,182.53	7,518.67	(8.11)
Tarlac	5,580.43	6,367.06	14.10
Isabela	5,477.02	5,890.79	7.55
Nueva Ecija	3,759.63	3,710.13	(1.32)
Other Provinces	17,330.03	19,131.54	10.40
<b>Freshwater Fish cage</b>	<b>82,527.20</b>	<b>85,160.84</b>	<b>3.19</b>
Batangas	61,271.94	63,665.85	3.91
Laguna	8,464.52	8,314.53	(1.77)
Camarines Sur	5,591.82	5,726.30	2.40
Albay	1,976.17	2,066.39	4.57
Rizal	1,693.50	1,735.91	2.50
Other provinces	3,529.26	3,651.87	3.47
<b>Freshwater Fish pen</b>	<b>22,268.23</b>	<b>21,379.50</b>	<b>(3.99)</b>
Rizal	11,769.04	11,998.12	1.95
Sultam Kudarat	6,197.20	5,002.10	(19.28)
Maguindanao	3,740.54	3,830.84	2.41
Laguna	514.87	496.85	(3.50)
Davao del Norte	16.49	19.42	17.77
Other provinces	30.10	32.18	6.88
<b>Rice Fish</b>	<b>43.46</b>	<b>61.84</b>	<b>42.27</b>
Pampanga	38.36	57.00	48.60
Pangasinan	1.27	2.00	57.49
Negros Occidental	3.05	1.76	(42.28)
Iloilo	0.55	0.73	32.90
Ilocos Norte	0.24	0.35	45.83
<b>Small Farm Reservoir</b>	<b>205.53</b>	<b>293.86</b>	<b>42.98</b>
Pampanga	56.56	151.25	167.41
Quirino	67.11	51.10	(23.85)
Isabela	28.06	30.29	7.93
North Cotabato	12.66	19.67	55.31
Bohol	10.88	9.53	(12.35)
Other provinces	30.26	32.02	5.84
<b>Marine Fishcage</b>	<b>2.02</b>	<b>7.01</b>	<b>247.57</b>
Bohol	1.32	0.75	(43.27)
Davao del Norte	0.70	6.26	800.00

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**Table 7. Aquaculture: Tiger Prawn, Mud Crab, Carp and Catfish Production of Top Producing Provinces by Culture Environment and Type of Aquafarm, Philippines, January - December 2011 - 2012<sup>P</sup>**

Species/Province	2011	2012	% Change
-metric tons-			
<b>TIGER PRAWN</b>	<b>47,494.68</b>	<b>48,196.64</b>	<b>1.48</b>
<b>Brackishwater Fishpond</b>			
Pampanga	18,894.72	18,653.44	(1.28)
Lanao del Norte	6,659.54	7,818.27	17.40
Bulacan	5,205.55	5,253.30	0.92
Zamboanga del Sur	3,366.67	3,355.41	(0.33)
Misamis Occidental	2,019.37	2,173.14	7.62
Other Provinces	11,348.84	10,943.07	(3.58)
<b>MUD CRAB</b>	<b>15,730.91</b>	<b>16,359.63</b>	<b>4.00</b>
<b>Brackishwater Fishpond</b>			
Pampanga	3,956.67	3,833.03	(3.12)
Lanao del Norte	6,722.56	7,504.98	11.64
Capiz	1,651.66	1,831.58	10.89
Sorsogon	1,076.66	779.06	(27.64)
Misamis Occidental	557.85	579.31	3.85
Other Provinces	1,765.51	1,831.68	3.75
<b>CARP</b>	<b>17,340.87</b>	<b>17,703.89</b>	<b>2.09</b>
<b>Freshwater Fishpond</b>	<b>385.41</b>	<b>367.62</b>	<b>(4.61)</b>
Tarlac	118.34	146.56	23.84
Lanao del Norte	91.95	79.32	(13.74)
Pampanga	74.31	76.58	3.05
Others Provinces	100.80	65.17	(35.35)
<b>Freshwater Fish Pen/Cage</b>	<b>16,940.23</b>	<b>17,311.92</b>	<b>2.19</b>
Rizal	15,894.55	16,292.54	2.50
Laguna	948.65	925.23	(2.47)
Metro Manila	84.84	84.90	0.07
Other Provinces	12.19	9.26	(24.08)
<b>Small Farm Reservoir</b>	<b>10.83</b>	<b>17.05</b>	<b>57.37</b>
Quirino	7.31	11.75	60.78
North Cotabato	0.98	1.85	89.74
Pangasinan	1.14	1.19	4.78
Pampanga		1.00	
Other Provinces	1.41	1.26	(10.73)
<b>Rice Fish</b>	<b>4.40</b>	<b>7.29</b>	<b>65.82</b>
Pampanga	4.16	7.00	68.41
Pangasinan	0.24	0.29	20.83
<b>CATFISH</b>	<b>3,129.07</b>	<b>3,606.58</b>	<b>15.26</b>
<b>Freshwater Fishpond</b>	<b>3,117.93</b>	<b>3,595.37</b>	<b>15.31</b>
Iloilo	941.92	1,050.49	11.53
Nueva Ecija	348.49	373.51	7.18
Pampanga	336.26	358.45	6.60
Davao City	295.27	348.43	18.00
Bulacan	255.64	292.45	14.40
Other Provinces	940.36	1,172.05	24.64
<b>Rice Fish</b>	<b>1.58</b>	<b>2.16</b>	<b>36.33</b>
Pangasinan	0.16	0.18	12.50
Pampanga	1.42	1.97	38.31
Negros Occidental		0.01	
<b>Small Farm Reservoir</b>	<b>9.55</b>	<b>8.89</b>	<b>(6.90)</b>
Isabela	2.52	2.32	(7.89)
Pampanga	0.94	2.03	115.40
North Cotabato	1.40	1.95	39.35
Cagayan	1.16	0.97	(16.72)
Quirino	0.73	0.63	(14.14)
Other Provinces	2.79	1.00	(64.31)
<b>Freshwater Fishcage</b>		<b>0.16</b>	
North Cotabato		0.16	

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**Table 8. Aquaculture: Mariculture Production by Species and by Province, Philippines, January - December 2011 - 2012<sup>P</sup>**

Species/Province	2011	2012	% Change
-metric tons-			
<b>Seaweed</b>	<b>1,840,832.86</b>	<b>1,751,070.64</b>	<b>(4.88)</b>
Palawan	477,185.46	451,926.35	(5.29)
Tawi-Tawi	372,484.07	319,176.61	(14.31)
Sulu	219,955.87	214,230.37	(2.60)
Bohol	126,717.88	124,947.92	(1.40)
Zamboanga Sibugay	126,428.85	114,992.71	(9.05)
Other Provinces	518,060.73	525,796.67	1.49
<b>Oyster</b>	<b>21,461.82</b>	<b>20,648.37</b>	<b>(3.79)</b>
Capiz	6,504.29	6,871.86	5.65
Bulacan	4,495.92	4,941.21	9.90
Negros Occidental	1,479.11	1,916.22	29.55
Iloilo	1,315.01	1,661.10	26.32
Cavite	994.44	1,426.79	43.48
Pangasinan	3,899.08	1,202.61	(69.16)
Other Provinces	2,773.98	2,628.58	(5.24)
<b>Mussel</b>	<b>22,442.71</b>	<b>25,660.44</b>	<b>14.34</b>
Cavite	6,435.54	8,060.86	25.26
Capiz	7,538.72	7,753.80	2.85
Samar	4,502.41	6,808.70	51.22
Bataan	1,438.28	1,007.98	(29.92)
Pangasinan	791.07	728.03	(7.97)
Negros Occidental	1,083.63	309.02	(71.48)
Other Provinces	653.05	992.04	51.91

P - Preliminary