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**STATUS REPORT ON THE OPERATION OF PHILIPPINE FLAGGED GROUP  
SEINE VESSELS OPERATING IN HIGH SEAS POCKET 1**

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# STATUS REPORT ON THE OPERATION OF PHILIPPINE FLAGGED GROUP SEINE VESSELS OPERATING IN HIGH SEAS POCKET 1

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## BACKGROUND

The Philippine is one of the members of the Western and Central Pacific Fisheries Commission (WCPFC) which implements CMM 2008-01 in which Purse Seine fishing in FADs at High Seas Pocket 1 (HSP1) has been temporary closed from 2009 until 2011. In 2012 Philippine-flagged boats was given access by the Commission under a Special Management Area in consonance with the Western and Central Pacific Fisheries Commission (WCPFC) Conservation Management Measures (CMM) 2011-01, CMM 2012-01, CMM 2013-01 and CMM 2014-01 respectively. Thirty-six (36) traditional ice-chilled purse seine/ring net catcher boats no more than 250 gross tonnage and its support crafts were allowed to conduct group seine operation in HSP1 to fish for not more than 9,846 fishing days per year. These boats target mainly skipjack tuna intended for canneries and wet markets.

The boats operating in HSP1 area were installed with vessel monitoring system/ALCs and also with 100% Regional Observer coverage. Results of operations from Day 1 are shown in Table 1 based from the Fisheries Observer Data.

**Table 1: Result of HSP1 Operations**

	<b>No. of Companies</b>	<b>No. of PS/RN Fleets</b>	<b>Fishing Days</b>	<b>Catch Rate per set</b>	<b>Total Catch (in Metric Tons)</b>
2012	6	10	211	9.695	2,044.765
2013	11	22	1,352	9.857	13,326.249
2014	19	35	2,669	10.728	28,633.962
2015(Jan-Jun)	17	31	1,631	8.742	14,257.821
Total			<b>5,863</b>	<b>9.937</b>	<b>58,262.797</b>

*Source: BFAR National Marine Fisheries Development Center records*

The Philippine being a coastal state derives its protein source on fish. With this level of tuna catch from HSP1, it has potential to provide protein source for 3.034 million Filipinos using the estimated per capita fish consumption in 2012 at 19.2 kilos according to the “The State of World Fisheries and Aquaculture 2014” by the Food and Agriculture Organization of the United Nations. This level of production can provide fish requirement of six-folds the population size of General Santos City, thus remarkably improving food security in the area.

However, a notable substantial amount of poor quality fish have been observed over the years. Thus, the need to evaluate the economic impact of the production in relation to ice-chilling preservation method being used by Philippine-Flagged boats operating in HSP1.

It has been monitored that substantial volume of fish landed by pelagic fisheries are spoiled/damaged due to poor handling. Despite the value added preservation efforts applied into smoked, dried fish and fish meals, the overall results on the prices of said products are still low value produced fish. Hence, the said situation needs intervention on how to improve the quality value of fish catch landed at the General Santos Port.

## **CATCH SUMMARY**

Table 1 shows the catch summary of Philippine flagged fishing vessels that were able to operate in HSP1 from October 2012 to June 2015 based on Fisheries Observer data. Total catch includes all fish species caught on purse seine and ringnet vessels. Majority of species caught were oceanic tuna (Yellowfin, Bigeye and Skipjack Tuna) comprising more than 90% of the total catch while the remainder of the catch were mixtures of other species like mackerel scad, kawa-kawa, frigate tuna, bullet tuna, rainbow runner, bigeye scad, etc.

All of the fish catches were loaded into fish carriers which brought them to General Santos City Fishport for unloading to canneries and wet markets. The remaining low quality fish due to spoilage and damaged during handling were processed into other products such as smoked, dried or fishmeal.

Data also shows an increased catch rate from 2012 to 2014 despite an increased number of fishing fleet from 10 catchers to 35 catchers respectively. In 2012 average catch per set is 9.695 metric tons, increased to 9.857 metric tons in 2013, 10.728 metric tons in 2014 and 8.742 metric tons in 2015 based on the partial data available for January to June 2015. Said outcome indicated that over the years volume of catch increase but abruptly decrease in 2015.

### **ANALYSIS OF CATCH PRODUCTION IN HSP1**

For the purpose of analyzing the economic impact of low-value/trash fish level in relation to ice-chilling method being used by Philippine-flagged boat operating in HSP1, we use the present context of low value/trash fish as commercially-important food fish landed by pelagic fisheries that are spoiled and/or damaged (due to rough handling and poor post-harvest practices) that could still be used for industrial purposes.

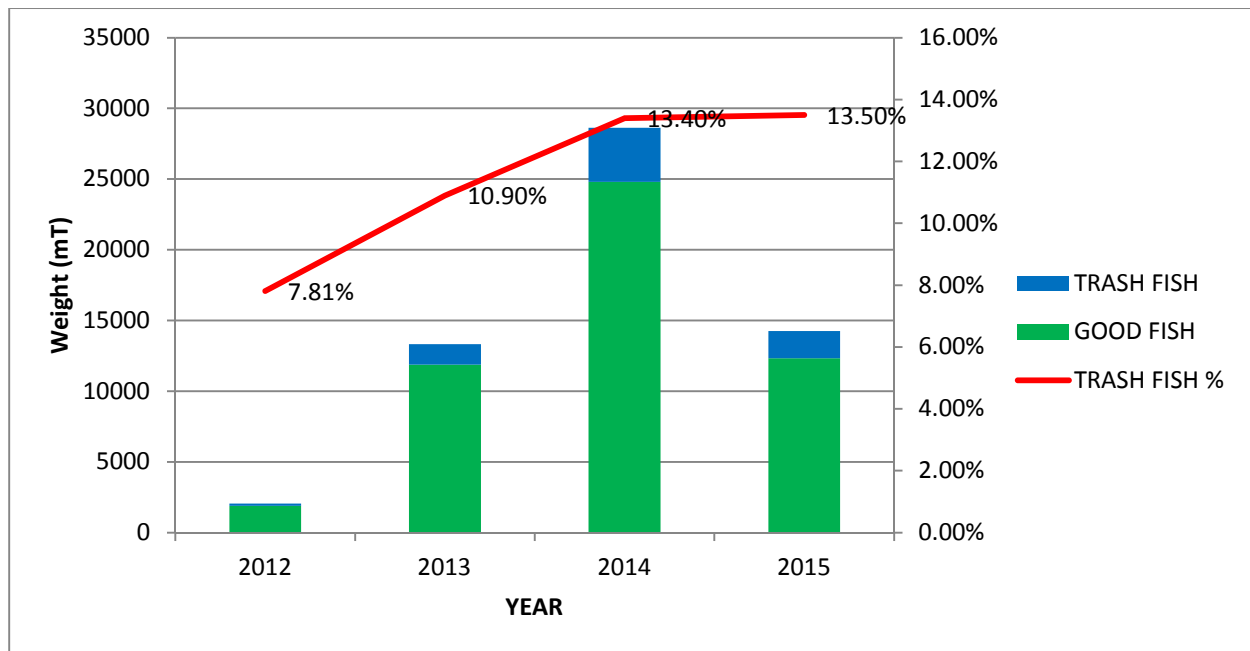
An analysis of quality of fish landed in General Santos City from HSP1 indicated that there has been an increasing trend in the level of low-value/trash fish. Low-value/trash fish are not acceptable for canning and for table fish consumption, thus end up for smoking, fishmeal processing or drying with significantly lower prices compared to highest prevailing market price for canning-grade tuna.

**Table 2. Comparison of Low Value/Trash Fish to Total Catch from 2012-2015.**

<b>YEAR</b>	<b>TOTAL CATCH(mT)</b>	<b>LOW VALUE/TRASH FISH(mT)</b>	<b>Percentage</b>
2012	2,044.765	159.76	7.81%
2013	13,326.249	1,452.18	10.90%
2014	28,633.962	3,835.71	13.40%
2015(Jan-Jun)	14,257.821	1,924.71	13.50%
<b>TOTAL</b>	<b>58,262.797</b>	<b>7,372.36</b>	<b>12.65%</b>

Based on Table 2, for 2012, low-value/trash fish was 7.81% of estimated catch which increased in 2013 to 10.90% of landings. In 2014 and first half of 2015 landings already

posted an increase of low-value/ trash fish at 13.40% and 13.50% respectively resulting to low-value/trash fish rate of 12.65% from Day 1(see Fig. 1).



**Fig 1. Fish Quality Landed in General Santos City**

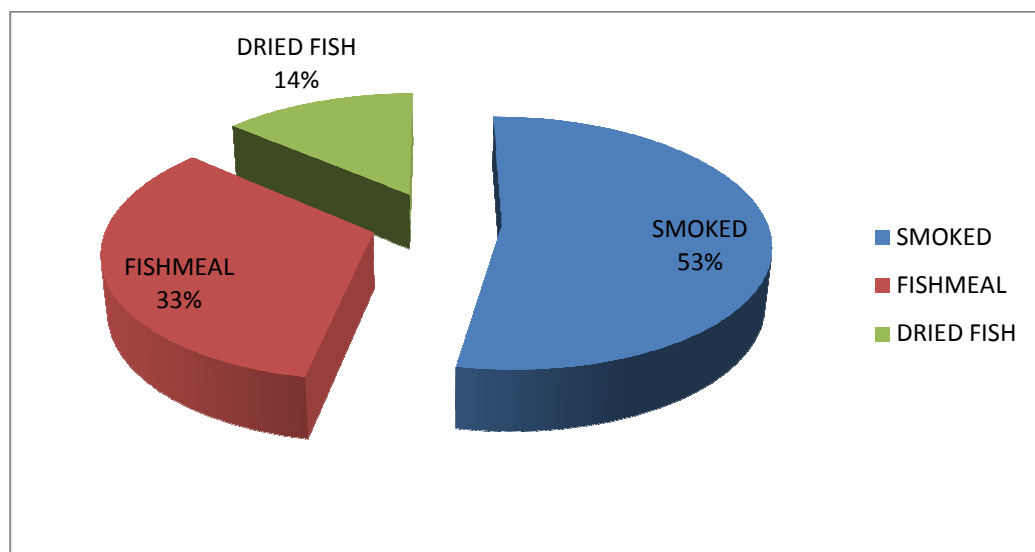
The increasing trend of low-value/trash fish can be attributed to the distance of the fishing ground from the landing site. The first batch of purse seine/ring net fleets in 2012 were able to locate their operations in HSP1 relatively closer to landing site compared to those who started later. Thus, with more fleets going farther in HSP1, the more low-value/trash fish landed in General Santos City. Considering the time to and distance of the fishing ground, post-harvest handling to preserve fish quality is very vital.

**Table 3. Breakdown of Low-value/Trash Fish from October 2012-June 2015**

YEAR	SMOKED (mT)	FISHMEAL (mT)	DRIED FISH (mT)	TOTAL (mT)
2012	73.89		85.87	159.76
2013	785.66	89.63	576.89	1,452.18
2014	1,833.63	1777.68	224.40	3,835.71
2015	1,210.59	589.50	124.62	1,924.71
<b>TOTAL</b>	<b>3,903.77</b>	<b>2,456.81</b>	<b>1,011.78</b>	<b>7,372.36</b>

Source: Industry Submitted data

Further analysis, shows that majority of low-value/trash fish end up for smoked at 53% followed by Fishmeal at 33% and Dried Fish at 14%.



**Figure. 2. Trash Fish by Product Composition (October 2012-June 2015)**

A valuation of low-value/trash fish using the validated average price per metric ton for the past 4 years for smoking at Php 18,000, for fishmeal at Php 4,500 and Php 2,670 for drying is estimated to total to **Php 84 Million or US\$ 1.9 Million** (Table 4).

**Table.4. Valuation of Trash Fish, from October 2012-June 2015 (in Philippine Pesos)**

YEAR	SMOKED	FISHMEAL	DRIED FISH	TOTAL
2012	1,330,020.00	-	229,272.90	1,559,292.90
2013	14,141,880.00	403,335.00	1,540,296.30	16,085,511.30
2014	33,005,340.00	7,999,560.00	599,148.00	41,604,048.00
2015	21,790,620.00	2,652,750.00	332,735.40	24,776,105.40
<b>TOTAL</b>	<b>70,267,860.00</b>	<b>11,055,645.00</b>	<b>2,701,452.60</b>	<b>84,024,957.60</b>

#### **ECONOMIC COST OF LOW-VALUE/TRASH FISH FROM HSP1 CATCHES**

The drop in quality of fish landed from HSP1 brought about by the nature of current operation using ice chilling method has a cost. The value of 7,372.36 metric tons of low-value/trash fish from HSP1 if hypothetically considered good is estimated at **Php 462**

**Million or US\$ 10.5 Million** (See Table 7). This results to an estimation of opportunity cost at around **Php 378 Million or US\$ 8.6 Million** (See Table 8) using the following assumptions:

1. Prices used are based on Bangkok’s price of Skipjack derived in Table 5.

**Table 5: Average Price per Metric Ton of Skipjack, for 2012-(Jan-Jun)2015 (in US\$)**

	Average Price per MT	Derivation/Source
2012	US\$ 2,074.00	As reported in WCPFC-SC10-2014/GN-WP-1
2013	US\$ 1,908.08	WCPFC-SC10-2014-GN-WP-01 reported 8% reduction
2014	US\$ 1,387.5	Data fromWCPFC-SC11-2015-GN-WP-01. Average of End of 2013 Price at \$1500, lowest price in April at \$1150, rebounded price by July at \$1800 and declined sharply in December at \$1,100
2015	US\$ 1,100.00	Data fromWCPFC-SC11-2015-GN-WP-01. Average of End of 2014 Price at \$1100, lowest price in April at \$950 and rebounded price by July at \$1250

2. Foreign exchange Conversion average rates of US\$ to Philippine Pesos based on Bangko Sentral ng Pilipinas website,

[http://www.bsp.gov.ph/dbank\\_reports/ExchangeRates\\_1.asp?freq=Annual](http://www.bsp.gov.ph/dbank_reports/ExchangeRates_1.asp?freq=Annual)

**Table 6: Average Conversion Rate of US\$ 1, from 2012-(Jan-Jun)2015 (in Philippine Pesos)**

YEAR	USD-PHP Conversion Rate
2012	42.2288
2013	42.4462
2014	44.3952
2015	44.5465

**Table 7: Valuation of Low-Value/ Trash Fish from HSP1 if Hypothetically Considered “GOOD”, from October 2012-June 2015 (in Philippine Pesos)**

<b>YEAR</b>	<b>SMOKED</b>	<b>FISHMEAL</b>	<b>DRIED FISH</b>	<b>TOTAL</b>
2012	6,471,473.23	-	7,520,711.95	13,992,185.18
2013	63,631,188.95	7,259,200.50	46,722,751.05	117,613,140.50
2014	112,948,564.17	109,502,137.05	13,822,667.50	236,273,368.72
2015 (Jan-Jun)	59,320,302.18	28,886,177.93	6,106,523.31	94,313,003.42
<b>TOTAL</b>	<b>242,371,528.53</b>	<b>145,647,515.48</b>	<b>74,172,653.82</b>	<b>462,191,697.83</b>

**Table 8: Differential Valuation of Low-Value/Trash Fish from HSP1, from October 2012 - June 2015 (in Philippine Pesos)**

<b>YEAR</b>	<b>SMOKED</b>	<b>FISHMEAL</b>	<b>DRIED FISH</b>	<b>TOTAL</b>
2012	5,141,453.23	-	7,291,439.05	12,432,892.28
2013	49,489,308.95	76,855,865.50	45,182,454.75	101,527,629.20
2014	79,943,224.17	101,502,577.05	13,223,519.50	194,669,320.72
2015 (Jan-Jun)	37,529,682.18	26,233,427.93	5,773,787.91	69,536,898.02
<b>TOTAL</b>	<b>172,103,668.53</b>	<b>134,591,870.48</b>	<b>71,471,201.22</b>	<b>378,166,740.23</b>

The opportunity cost of Php 378 Million or US\$ 8.6 Million is the income deprived of the players of HSP1. With the current income sharing scheme where 60% of net income goes to fishers and crew onboard the boats and 40% goes to boat owners-operators, an estimated loss in income of Php 227 Million (US\$ 5.2 Million) and Php 151 Million (US\$ 3.4 Million), was incurred respectively.

The total loss is equivalent to income of 3,122 average Filipinos using 2013 per capita income of US\$2,765 (<http://business.inquirer.net/175464/boom-ups-filipinos-per-capita-income-at-2765-in-2013-luxury-goods-sale-rising>) or income of 1,609 families using 2012 average household income (<https://psa.gov.ph/content/2012-fies-statistical-tables>) which support the living of 7,401 Filipinos.