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ECONOMIC OVERVIEW OF MEXICO'S CURVINA GOLFINA FISHING SEASON - 2014

CapLog Reports are published and distributed on a regular basis with the goal of contributing to understanding of the challenges and opportunities facing fishermen and the seafood industry in different fisheries around the world. The series aims to identify baseline information, trends and issues that merit further attention and productive discussion. Copies of the reports are available at: http://caploggroup.com/projects/

Purpose of Economic Overview of the 2014 Season: Curvina Golfina

This report presents EDF and its partners with key economic reference points for the 2014 curvina golfina season. When possible and as needed, the report also seeks to compare data from the 2014 season with data from the 2011, 2012 and 2013 curvina fishing seasons. Please note that available data varied significantly among the four years referenced in this report. The data, as well as the frequency and completeness of records, was inconsistent. While CapLog made several assumptions to adjust the data to allow for comparisons across years, CapLog considers the data and findings presented in the following report as general reference points. CapLog cautions readers from drawing or communicating conclusions from the information without recognizing the limitations of the data.

Throughout this report there are references to specific initiatives that EDF and its partners have implemented in this particular fishery. Being that EDF commissioned this report, we have identified how several of these initiatives have potentially impacted the data CapLog analyzed. CapLog recognizes that there are likely additional external factors that also play a role in the fishery and has attempted to recognize those factors where possible.

CapLog's overview of the previous curvina golfina seasons can be found on our website: http://caploggroup.com/projects/

KEY FINDINGS

Structure of the Curvina Golfina Fishery in Golfo Santa Clara, Sonora

- *Curvina golfina landings in Golfo Santa Clara (GSC) in 2014 were 10% higher than in 2013*
  Officials increased the Total Allowable Catch (TAC) for curvina golfina by 9.6% in 2014, likely contributing to the 10% rise in total GSC landings.

- *GSC fishermen exceeded their TAC by 83 metric tons (MT)*
  Based on official data, curvina golfina fishermen in GSC exceeded their TAC by 3.5%. Total landings in excess of TAC increased from 8 MT in 2012 and 72 MT in 2013, to 83 MT in 2014. Fishermen report that undocumented landings may mean that the catch in excess of quota is even higher.

- *Curvina landings were distributed more equally across the season than in previous years*
  GSC fishermen fished curvina golfina across five tides and caught no more than 30% of their quota during any one tide. In contrast, in each of the previous years studied, the GSC fleet landed between 40%-55% in a single tide.

- *The curvina market in GSC appears to have returned to the pre-2012 status quo*
  22 buyers purchased curvina in GSC in the 2014 season; a single buyer purchased over 50% of all curvina landings in the town. These numbers are largely consistent with 2012, suggesting a market that has stabilized since significant shifts in previous years.

- *The number of non-permitted boats landing curvina in GSC likely increased in 2014*
  Informal sources close to the fishery estimate that the number of illegal vessels delivering curvina to GSC increased from between 20-65 in 2013, to between 60-80 in 2014.

Curvina Golfina Prices

- *2014 ex-vessel prices (prices paid to fishermen) were down from 2013, up from 2011*
  Average 2014 ex-vessel curvina prices in GSC were just over $13 pesos/kg, down 10% from 2013 prices, but 23% higher than the 2011 pre-TAC average ex-vessel price.

- *Ex-vessel curvina prices in GSC fluctuated the least across the 2014 season than during any of the previous three years*
  Ex-vessel curvina prices started the 2014 at a four year low. However, the 2014 season saw significantly less fluctuation than any of the previous three years.

- *Ex-vessel buche (curvina swim bladder) prices have continued to rise*
  The average price of curvina buche continued to rise, with a 33% increase from 2013 to 2014 and a 24-fold increase since 2005.

- *Wholesale (Official Nueva Viga) curvina price data show an inexplicably large increase over 2013*
  Despite a 10% decline in GSC ex-vessel curvina prices from 2013 to 2014, Nueva Viga data show an increase of 64% in wholesale curvina prices.[1]

Revenue and Profit from the Curvina Golfina Fishery

- *Golfo Santa Clara's gross revenue from curvina golfina increased modestly in 2014*
  Total ex-vessel revenue from the Golfo Santa Clara curvina fishery increased by 7.5%, primarily due to a 33% increase in ex-vessel buche prices.

- *The percentage of buche revenue as a percentage of total revenue continued to rise*
  Buche revenue accounted for 35% of total fleet wide revenue in 2014.

- *Catch-per-unit-effort (CPUE) increased and time on water likely decreased in 2014*
  Time on water reportedly decreased 31% with a likely related increase in catch-per-unit-effort in 2014 in comparison to 2013. [NOTE: This finding is based on a very limited set of cost surveys and should be considered in that context.]

- *Rough estimates suggest that 2014 per-vessel profit was similar to 2013; profit-per hour may have increased by as much as 66%*
  CapLog fishermen surveys reveal that per-panga and per-fishermen profit appears nearly unchanged from 2013 to 2014. However, shorter trip times reported in the 2014 season result in an estimated 66% increase in profit per hour on water, a measure of fishing efficiency and a proxy for wage.

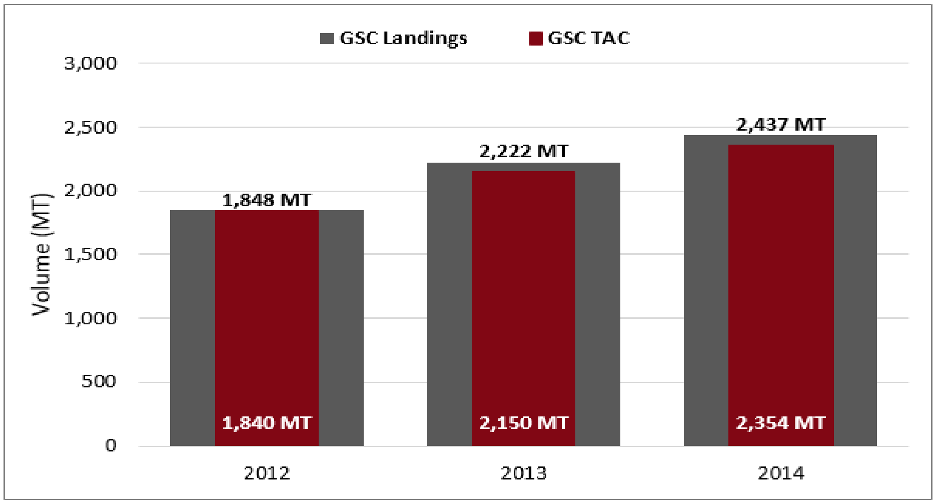
[1] This data is not consistent with findings from an informal study of curvina prices at the Nueva Viga. Changes in data gathering and reporting methodology may account for this large increase.

THE STRUCTURE OF THE CURVINA GOLFINA FISHERY (2011 - 2014)

Both curvina TAC and landings increased in 2014

In 2014 the curvina golfina total allowable catch (TAC) increased by 9.4%, while the total curvina landings in GSC increased by 9.6%. In each of the past three years, GSC fishermen have been fishing more than their allocated TAC. In 2014 the GSC fleet landed 83 MT in excess of their quota (3.5% over TAC), compared to 72 MT in 2013 (3.3% over TAC) and just 8 MT (.4% over TAC) in 2012, when a robust per-tide catch and monitoring agreements were in place. Informal reports of increased landings from illegal vessels may mean that the amount caught in excess of the TAC is even higher than suggested by the above data.

Figure 1: Golfo Santa Clara Landings v. Total Allowable Catch (TAC), 2012-2014



GSC curvina landings were distributed more evenly over the season than in past years

Curvina fishermen in GSC appear to have distributed their catch more evenly across the course of the season than in previous years, with no more than 29% of the total catch occurring in any single tide, as presented in Figure 2. Prior to 2014, the GSC fleet had landed between 42% and 55% of their total catch in a single tide.

Table 1 presents another way to view this trend, comparing the percentage of curvina landings occurring during the first two tides of a given season with the catch in the subsequent tides.

Figure 2: Distribution of Landings by Tide, 2011-2014

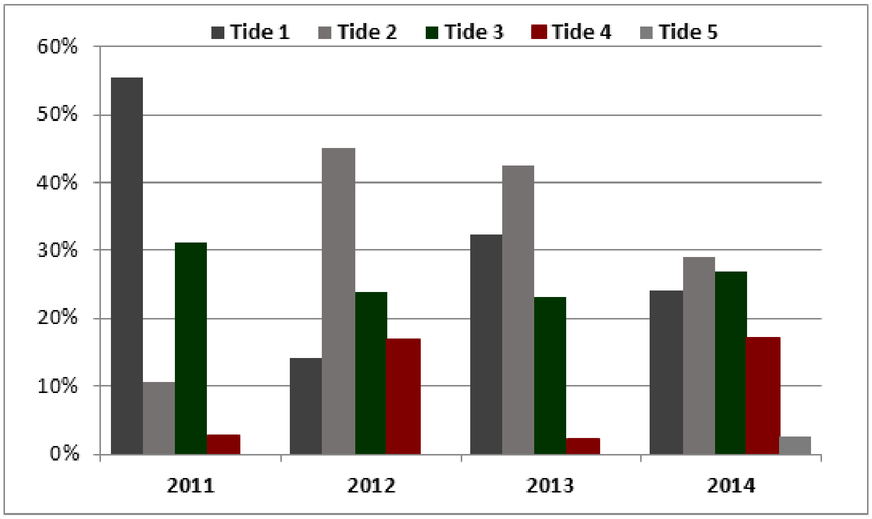


Table 1: Distribution of Curvina Landings

	2011	2012	2013	2014
First Two Tides	66.1%	59.1%	74.8%	53.2%
Remaining Tides	33.9%	40.9%	25.2%	46.8%

The number and structure of first receivers has remained stable

A total of 22 buyers purchased curvina from fishermen in GSC in 2014. The general structure of the market in 2014 was nearly identical to that of 2011 and 2013, with the largest single buyer purchasing roughly half of all curvina landed in GSC and large volume buyers controlling over 90% of all curvina landings in GSC.

Table 2: Golfo Santa Clara Buyer/Distributor Market Share 2011 - 2014

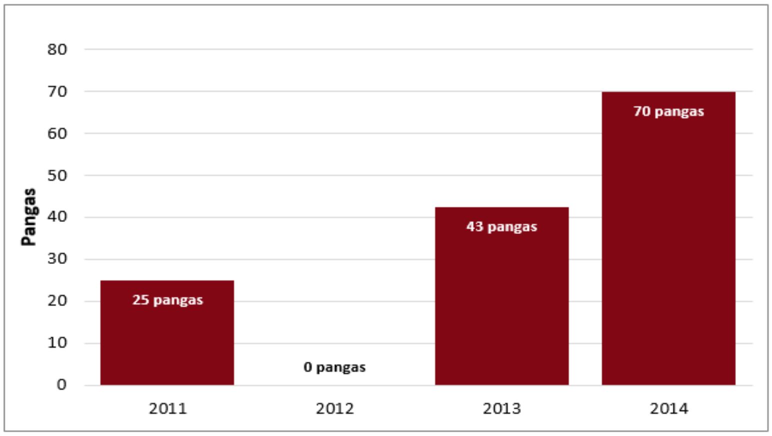
	2011		2012		2013		2014	
Distributor Size (Amount of Curvina Purchased)	# of Distributors	% of Total Curvina Purchased	# of Distributors	% of Total Curvina Purchased	# of Distributors	% of Total Curvina Purchased	# of Distributors	% of Total Curvina Purchased
> 1,000,000 kg	1 buyer(s)	53%	1 buyer(s)	68%	1 buyer(s)	48%	1 buyer(s)	50%
500,000 kg - 1,000,000 kg	0 buyer(s)	0%	0 buyer(s)	0%	0 buyer(s)	0%	0 buyer(s)	0%
100,000 kg - 500,000 kg	5 buyer(s)	38%	1 buyer(s)	11%	5 buyer(s)	38%	6 buyer(s)	40%
25,000 kg - 100,000 kg	4 buyer(s)	8%	5 buyer(s)	15%	4 buyer(s)	9%	4 buyer(s)	5%
5,000 kg - 25,000 kg	2 buyer(s)	1%	5 buyer(s)	5%	7 buyer(s)	3%	7 buyer(s)	4%
< 5,000 kg	1 buyer(s)	0%	4 buyer(s)	1%	6 buyer(s)	1%	4 buyer(s)	0%
TOTAL	13 buyer(s)	100%	16 buyer(s)	100%	23 buyer(s)	100%	22 buyer(s)	100%

The consistency in structure between 2011, 2013 and 2014 highlights 2012 as an anomalous year. In 2012 EDF supported the development of a suite of community fishing agreements that established a per-tide catch and set a price floor for all curvina purchased. That season the largest buyer purchased over two thirds of the curvina landed in the town, leaving less fish for the smaller volume buyers. In subsequent years, the fishing community opted to design and pursue similar agreements without the support of EDF or its NGO partners. 2013 and 2014 data suggest that the market structure may have returned to the pre-TAC status quo.

The number of non-permitted vessels landing curvina golfina in GSC likely increased in 2014

Before 2012, many vessels hailing from ports other than GSC fished the waters around GSC and a portion of these delivered curvina golfina to GSC buyers. Informal estimates from industry participants suggest that in 2011 between 20 and 30 of these 'outside' vessels delivered their product in GSC but were not included in monitoring data. These same sources agree that in 2012 no 'outside' pangas delivered curvina golfina in GSC, likely a result of improved monitoring processes and the strong community harvest agreement, supported by EDF and its NGO partners.

Figure 3: Average Estimated Number of Unauthorized Pangas Delivering Curvina to Golfo Santa Clara, 2011-2014



In 2013, despite the introduction of individual fishing permits, the number of illegal pangas delivering fish to GSC began to rise, with estimates ranging from 20-65 vessels. By all accounts, there was a marked increase in the presence of illegal pangas during the 2014 season, with estimates ranging from 60-80 unauthorized boats delivering curvina to GSC buyers, with some fishermen suggesting it was as high as 100.

CURVINA GOLFINA (GSC) AND CURVINA (NV) PRICES (2011 - 2014)[2]

Average seasonal prices

As presented in Table 3 to the right, the average seasonal (March – May) ex-vessel price in GSC for curvina golfina fell by 10% from 2013 to 2014, while the average seasonal (March – May) market price for curvina at the Nueva Viga increased by 64% over the same period.

Table 3: Average Ex-Vessel and Market Curvina Prices, 2011 -2014

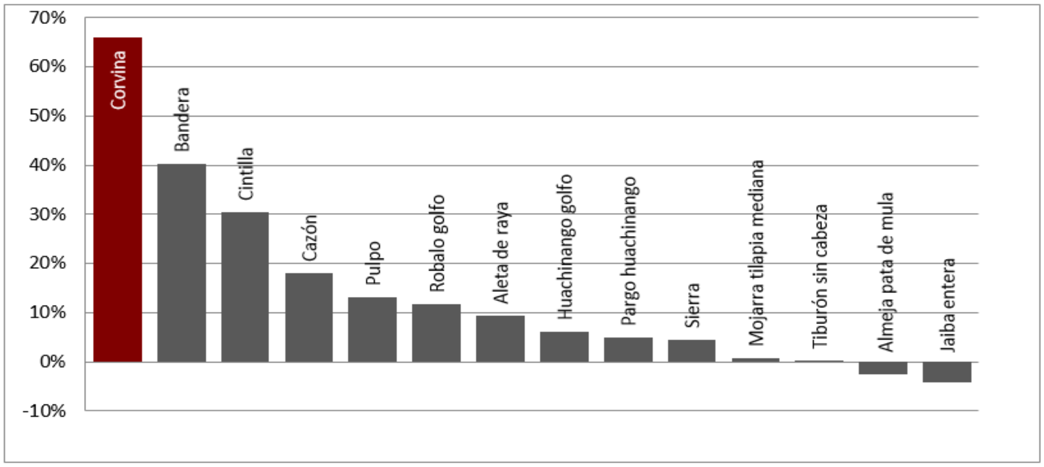
(Golfo Santa Clara and Nueva Viga; March-May; 2011 pesos/kg)

	2011	2012	2013	2014
Ex-Vessel Price	$ 10.70	$ 17.91	$ 14.55	$ 13.12
Market Price	$ 23.36	$ 27.62	$ 23.43	$ 38.45

Figure 4 below shows the changes in prices for popular seafood[3] commercialized at the Nueva Viga market during Lent 2013 and Lent 2014. Of the 14 species tracked, curvina had the largest increase in reported price.

Figure 4: Percentage Change in Market Price of Popular Seafood During Lent

(Nueva Viga; % Change; March-April; 2013 - 2014; 2011 pesos)



Average daily ex-vessel and market prices

The start of the 2014 saw the lowest average ex-vessel prices for curvina landed in GSC in the past four years. [4] However the prices also remained quite stable over the course of the season, with a slight dip post-Lent and

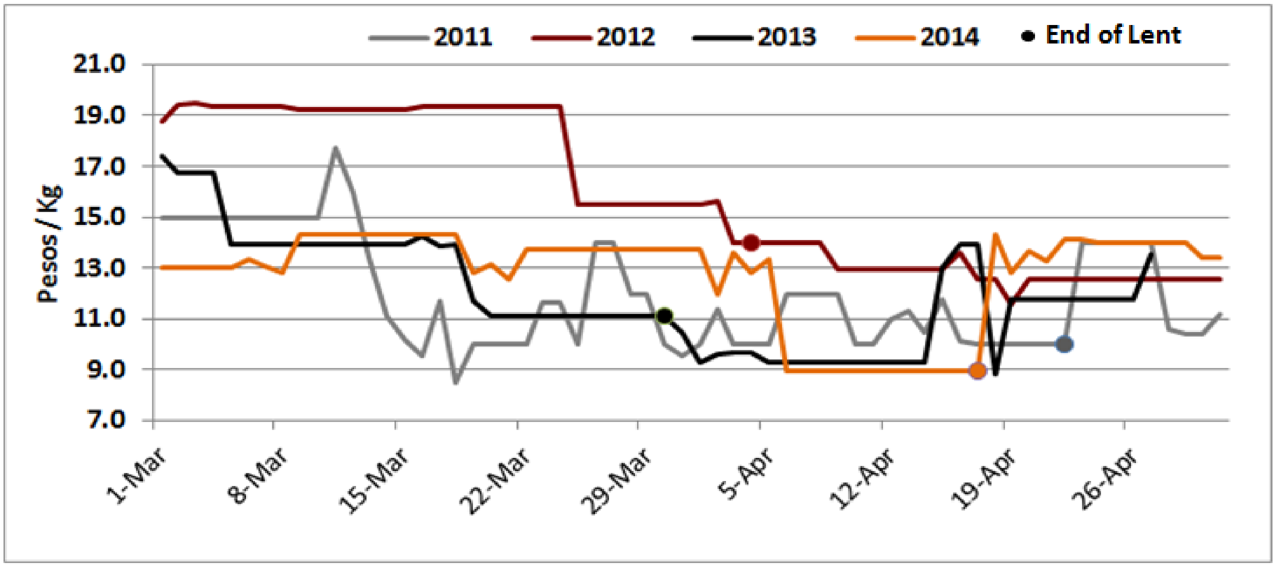
[2] CapLog uses two primary sources of data to track curvina golfina prices. For data on ex-vessel prices (the price paid to fishermen) CapLog uses data captured by a catch monitoring program co-sponsored by the Government of Sonora, CONAPESCA and EDF. The monitoring program records the deliveries date, price and volume of nearly all of the curvina golfina landed in GSC, enabling the calculation of very detailed ex-vessel price information, weighted by volume and date of delivery.
The average wholesale market prices at the Nueva Viga seafood market in Mexico City best reflect the behavior of the national market for curvina golfina in Mexico. The Nueva Viga is the primary destination for curvina golfina landed in GSC, historically receiving roughly half of total curvina landings. The market has small CONAPESCA and Secretary of Economy offices located on the premises that track the volume and price of the market's seafood sales on a daily basis.

[3] Shrimp products were omitted as shrimp prices globally hit highs in early 2014, as a result of outbreaks of disease in shrimp aquaculture operations.

[4] Due to the few number of price data points reported from 2011-2014, missing dates were filled in using the price information from the temporally closest price point (before or after), in order to smooth out the data for the purpose of

a recovery during the final tides. This price stability may be a reflection of the relatively even distribution of the catch across the season.

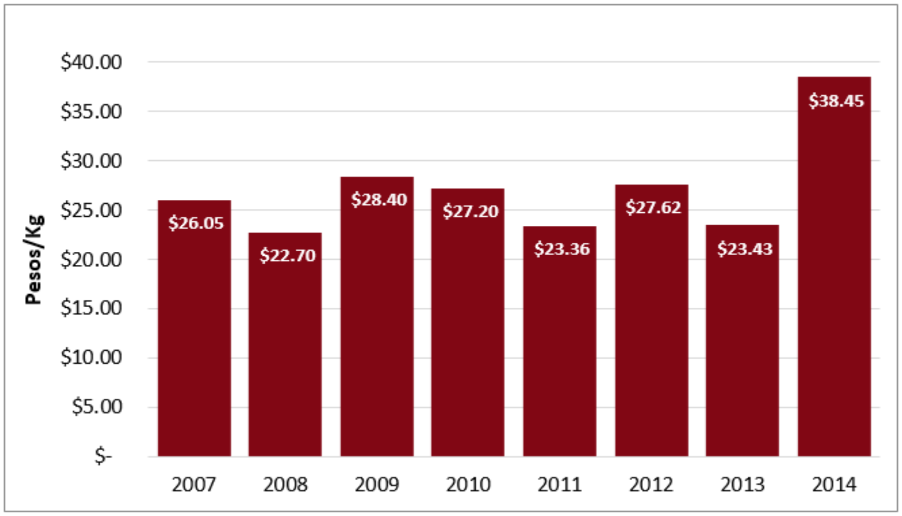
Figure 5: Average Daily Ex-Vessel Prices for Curvina Golfina
(Golfo Santa Clara; 2011 - 2014; 2011 pesos/kg)



Starting in 2014, EDF began working directly with curvina golfina producers to access higher value markets. While the 2014 pilot was too small to impact the average ex-vessel prices, the participants were successful in achieving higher prices. Future efforts to build upon the pilot project may buoy ex-vessel prices post Lent.

Average market prices for curvina golfina at the Nueva Viga market during the 2014 season were, on average, 64% higher than the previous season, the highest prices recorded in at least the last 8 years. [NOTE: This may reflect a change in the way the Nueva Viga tracks price data.]

Figure 6: Historic Curvina Market Prices – In Season (March-May)
(Nueva Viga; 2007-2014; 2011 pesos/kg)



presentation. In the event that two price points were equidistant, the earlier price point was taken. These data points added for graphical smoothing were not included in average price calculations.

In 2014 EDF commissioned independent monitoring of Nueva Viga prices, in part to address concerns over the accuracy of the officially reported data. Figure 7 compares the curvina wholesale price data gathered by EDF's informal study with the official data from the Nueva Viga available on the Sistema Nacional de Información e Integración de Mercados (SNIIM). The average price recorded by EDF informal monitoring was, on average, 51% lower than the official Nueva Viga prices.

Curvina buche prices continue to rise

Putting the modest historical fluctuation of curvina golfina prices into perspective is the rapid rise of the price of curvina swim bladder, or buche. Figure 8 shows the dramatic rise in fresh buche prices over the past decade, from an average of 10 pesos/kg in 2005 to 215 pesos/kg in 2014 - a 24-fold increase. Many observers in the industry believed that the buche market had reached a peak in 2013. However, as 2014 data show, the price ceiling for curvina buche was not yet reached.

Figure 7: Nueva Viga v. EDF Monitored Price

(2014; 2011 pesos/kg)

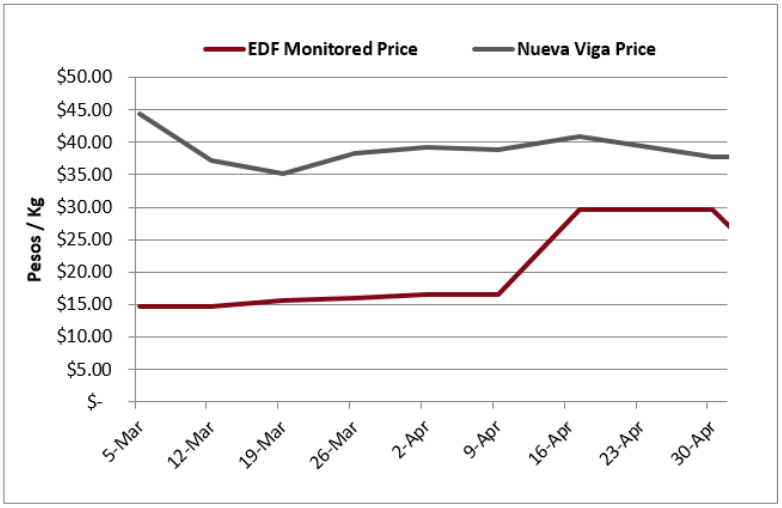
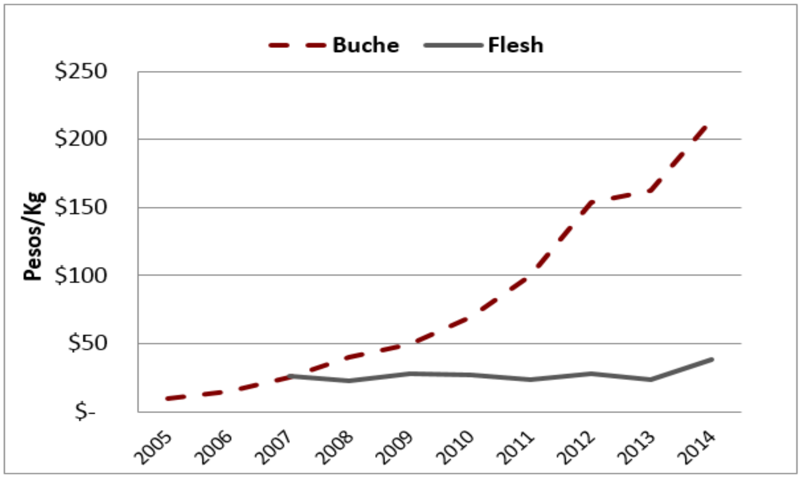


Figure 8: Historic Buche and Curvina Market Prices

(Golfo Santa Clara v. Nueva Viga; 2005-2014; 2011 pesos/kg)

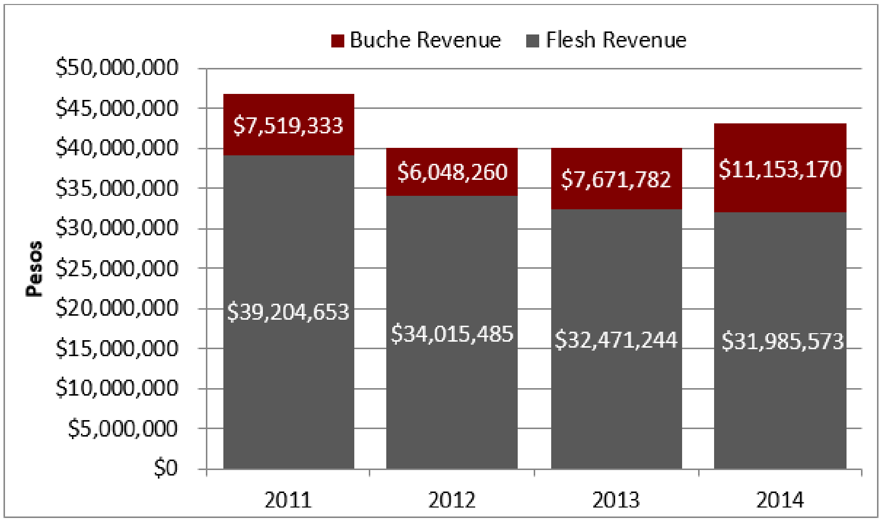


REVENUE AND PROFIT FROM THE CURVINA GOLFINA FISHERY (2011 – 2014)

Changes in GSC ex-vessel revenue

Figure 9 presents a comparison of estimated ex-vessel revenue generated by the fishery from 2011 to 2014. Total ex-vessel revenue from the Golfo Santa Clara curvina fishery increased by 7.5%, as a result of a 33% increase in buche prices. Ex-vessel revenues from 2012 to 2014 were significantly lower than in 2011. Buche revenue continues to play a growing role in overall fleet revenue, making up 35% of total revenue in 2014.

Figure 9: Estimated Ex-Vessel Revenue from GSC Curvina Golfina Fleet
(Golfo Santa Clara; 2011-2014; 2011 pesos)



Per-panga revenue estimates

Table 4 below provides an overview of several key metrics for the 2014 curvina golfina season in GSC, including a rough approximation of the change in per-panga (per boat) ex-vessel revenue associated with the curvina fishery. Estimating per-panga revenue is challenging, due to the presence of unregistered 'illegal' boats delivering curvina to processors. To account for this, CapLog presents below per-panga revenue given a scenario that factors in moderate participation by illegal boats. Two additional scenarios (low and high) are included in the Appendix, as reference. These calculations suggest that there was only a modest increase of 3% in per-vessel income, despite an increase in the per-vessel catch and buche prices.

Table 4: Summary of Key Landing, Price and Revenue Metrics
(Mid-Range Estimate of Illegal Panga Participation; Golfo Santa Clara; 2011-2014; 2011 Pesos)

MID EST. ILLEGALITY	2011	2012	2013	2014	%Δ 2013-2014	%Δ 2011-2014
Total Curvina Catch (kg)	3,530,203 kg	1,847,902 kg	2,222,238 kg	2,437,364 kg	9.7%	-31.0%
Number of Pangas Landing in GSC	452 pangas	432 pangas	451 pangas	471 pangas	4.4%	4.2%
Avg. Catch per Panga	7,810 kg	4,278 kg	4,927 kg	5,175 kg	5.0%	-33.7%
Avg. Curvina Flesh Prices (2011 MXN/kg)	$10.7 pesos/kg	$17.9 pesos/kg	$14.6 pesos/kg	$13.1 pesos/kg	-9.8%	22.7%
Avg. Curvina Buche Prices (2011 MXN/kg)	$100 pesos/kg	$154 pesos/kg	$162 pesos/kg	$215 pesos/kg	32.5%	114.8%
Total Ex-Vessel Revenue (Buche + Flesh; 2011 pesos)	$46,723,985 pesos	$40,063,745 pesos	$40,143,026 pesos	$43,138,743 pesos	7.5%	-7.7%
Avg. Per Panga Revenue (Buche + Flesh; 2011 pesos)	$103,372 pesos/panga	$92,740 pesos/panga	$89,009 pesos/panga	$91,590 pesos/panga	2.9%	-11.4%

Over the past two curvina golfina seasons, CapLog worked with EDF to design and conduct a survey that gathered information on per-panga operational costs and fishing effort. Between 15-25 curvina golfina fishermen based in GSC were interviewed after each fishing tide. The results of the survey are shown in Table 5. Of particular note was the marked decrease in the amount of time the nets were in the water per trip, from 42 minutes in 2013 to 17 minutes in 2014. The average trip length also decreased, from 6 hours in 2013 to 4 hours in 2014. Finally, the average catch per trip increased by over 25%. These are all indicators of more efficient fishing, though it is difficult to say if this is the cause of a behavioral change or by changes in the location and density of the curvina stock.

Table 5: Results of Fishing Cost Survey: 2013 v. 2014

Category	Data	2013 Per Tide	2014 Per Tide	% Δ
A) Effort and Catch	Numer of Trips	2 trips	2 trips	0.0%
	Duration of Net In Water (min)	42 min	17 min	-60.0%
	Duration of Fishing Trip (hr)	6 hours	4 hours	-28.9%
	Distance to Fishing Location (km	15 km	16 km	10.6%
	Harvest per Trip	901 kg	1,143 kg	26.9%
B) Trip Costs	Fuel (pesos)	1,261 pesos	1,197 pesos	-5.1%
	Oil (pesos)	89 pesos	112 pesos	25.4%
	Lunch (pesos)	432 pesos	277 pesos	-35.7%
	Trailer (pesos)	296 pesos	269 pesos	-9.0%
	Gutting Cost (Pesos)	718 pesos	1,538 pesos	114.2%
	Other (pesos)	372 pesos	127 pesos	-65.8%

Based on the results of this survey and the per-panga revenue calculations from the monitoring data presented in Table 5, CapLog roughly estimates per-panga and per-fishermen profit from the curvina golfina fishery during the 2014 season in Table 6.[5] While per-panga and per-fishermen profit is nearly unchanged from 2013 to 2014, the shorter trip times reported in the 2014 season translate into a 66% increase in profit per hour on water, a measure of fishing efficiency and a proxy for wage.

Table 6: Estimated Changes in Per-Panga Profitability: 2013 v. 2014

	2013	2014	%Δ
Catch (Whole)	5,270 kg	5,728 kg	9%
Flesh Equivalent	4,480 kg	4,869 kg	9%
Buche Equivalent	112 kg	122 kg	9%
Revenue (Flesh)	$65,177	$63,879	-2%
Revenue (Buche)	$18,185	$26,231	44%
Total Revenue	**$83,361 pesos**	**$90,110 pesos**	8%
Variable Costs	$18,533 pesos	$17,639 pesos	-5%
Repair Costs	$21,665 pesos	$25,571 pesos	18%
New Nets	$3,824 pesos	$7,106 pesos	86%
Total Costs	**$44,022 pesos**	**$50,317 pesos**	14%
Profit	**$39,340 pesos**	**$39,793 pesos**	1%
Crew Share of Profit	**$13,113 pesos**	**$13,264 pesos**	1%
Profit per Fishermen	**$4,371 pesos**	**$4,421 pesos**	1%
Profit per Hours on Water	**$129 pesos/hr**	**$215 pesos/hr**	66%

It is difficult to draw concrete conclusions about the profitability of GSC fishermen without additional information about effort, costs and participation in other fisheries. There are too many variables that affect overall fleet profitability.

[5] Due to the relative few number of respondents and the fact that the surveys were in some cases conducted several days after the tide, the results of the survey and the associated analysis should be considered an illustrative reference point, not a precise calculation. As such, comparative analysis has significant constraints due to the nature of the data from both years.

CONCLUSIONS

A firm grasp of the economic and market dynamics at work in Mexico's fisheries is vital to understanding the incentives that drive fishing behavior and how different policies affect risks to Mexico's coastal resources and EDF's long-term goals for the fishery.

The fourth consecutive year of EDF-sponsored capture and price monitoring in the GSC curvina golfina fishery provides stakeholders with the data necessary to begin to observe and comment on trends. Several significant trends stand out based on the comparative analysis of economic data from the past four years:

(1) Ex-vessel buche prices continue to be a major driver of profitability in the fishery, with buche revenue comprising nearly a third of GSC's total ex-vessel curvina revenue. Sustained growth in buche prices is possibly a factor contributing to illegal participation in the fishery.

(2) For the first time in recent history, GSC fishermen appear to be distributing their catch more evenly across the entire curvina golfina season. In prior years, a preponderance of the TAC was caught during the first two tides, resulting in a market glut and a corresponding drop in prices. The notably more metered fishing effort during the five tides of the 2014 season may have contributed to decreased price variability across the season.

    This shift in the timing of fishing effort coincides with the introduction of vessel-level catch limits in the fishery, which have in the past proven effective at curbing some factors which often lead to 'a race to fish'. It also follows EDF-sponsored efforts to provide the GSC community with educational materials on seafood market behavior. Other factors also likely affect the change in fishing behavior.

(3) The suite of interventions that EDF supported in the 2012 fishing season (e.g., establishment of the TAC, community agreement, guaranteed price floor, and per-tide catch limits) seemed to have had a measurable impact on the buyer structure, ex-vessel prices, wholesale prices and the presence of illegal fishermen in GSC in 2012. After 2012 these community agreements began to take place without the support of EDF or other NGOs. In the absence of direct NGO support in the organization and design of these agreements it appears that the market has returned to pre-2012 conditions. Of particular note are the increase of landings in excess of the TAC and the reportedly growing number of non-permitted boats participating in the fishery.

APPENDIX A: Variables Affecting Per-Panga Revenue and Profitability Estimates

Estimated Landings and Revenue: Estimated landings and revenue numbers in this memo are based on data collected through government and EDF-funded monitoring. The breadth of this monitoring and the quality of the data captured increased from 2011 to 2014. We are confident that the estimated total revenue from Golfo Santa Clara (GSC) is a fair approximation for 2011-2014 fishing seasons.

Per Panga Estimates: The total ex-vessel GSC revenue listed in the tables above includes all curvina golfina landed in and sold from the port of GSC. As such, any per panga revenue estimate that did not take the 2011 'outside' vessels into account would result in artificially high per panga revenue numbers. To control for this, we calculated an average of the low, medium and high ranges for illegal panga participation during the 2011 and 2013 seasons, which is the basis for all 2011 and 2013 numbers in this memo.

APPENDIX B: Per-Panga Revenue Estimates Under Three Illegal Participation Scenarios

Table 4a: Summary of Key Landing, Price and Revenue Metrics

(Low-End Estimate of Illegal Panga Participation; Golfo Santa Clara; 2011-2014)

LOW EST. ILLEGALITY	2011	2012	2013	2014	%Δ 2013-2014	%Δ 2011-2014
Total Curvina Catch (Kg)	3,530,203 kg	1,847,902 kg	2,222,238 kg	2,437,364 kg	9.7%	-31.0%
Number of Pangas Landing in GSC	432 pangas	432 pangas	428 pangas	451 pangas	5.4%	4.4%
Avg. Catch per Panga	8,172 kg	4,278 kg	5,192 kg	5,404 kg	4.1%	-33.9%
Avg. Curvina Flesh Prices (2011 MXN/Kg)	$10.7 pesos/kg	$17.9 pesos/kg	$14.6 pesos/kg	$13.1 pesos/kg	-9.8%	22.7%
Avg. Curvina Buche Prices (2011 MXN/Kg)	$100 pesos/kg	$154 pesos/kg	$162 pesos/kg	$215 pesos/kg	32.5%	114.8%
Total Ex-Vessel Revenue (Buche + Flesh; 2011 pesos)	$46,723,985 pesos	$40,063,745 pesos	$40,143,026 pesos	$43,138,743 pesos	7.5%	-7.7%
Avg. Per Panga Revenue (Buche + Flesh; 2011 pesos)	$108,157 pesos/panga	$92,740 pesos/panga	$93,792 pesos/panga	$95,651 pesos/panga	2.0%	-11.6%

Table 4b: Summary of Key Landing, Price and Revenue Metrics

(Mid-Range Estimate of Illegal Panga Participation; Golfo Santa Clara; 2011-2014)

MID EST. ILLEGALITY	2011	2012	2013	2014	%Δ 2013-2014	%Δ 2011-2014
Total Curvina Catch (Kg)	3,530,203 kg	1,847,902 kg	2,222,238 kg	2,437,364 kg	9.7%	-31.0%
Number of Pangas Landing in GSC	452 pangas	432 pangas	451 pangas	471 pangas	4.4%	4.2%
Avg. Catch per Panga	7,810 kg	4,278 kg	4,927 kg	5,175 kg	5.0%	-33.7%
Avg. Curvina Flesh Prices (2011 MXN/Kg)	$10.7 pesos/kg	$17.9 pesos/kg	$14.6 pesos/kg	$13.1 pesos/kg	-9.8%	22.7%
Avg. Curvina Buche Prices (2011 MXN/Kg)	$100 pesos/kg	$154 pesos/kg	$162 pesos/kg	$215 pesos/kg	32.5%	114.8%
Total Ex-Vessel Revenue (Buche + Flesh; 2011 pesos)	$46,723,985 pesos	$40,063,745 pesos	$40,143,026 pesos	$43,138,743 pesos	7.5%	-7.7%
Avg. Per Panga Revenue (Buche + Flesh; 2011 pesos)	$103,372 pesos/panga	$92,740 pesos/panga	$89,009 pesos/panga	$91,590 pesos/panga	2.9%	-11.4%

Table 4c: Summary of Key Landing, Price and Revenue Metrics

(High-End Estimate of Illegal Panga Participation; Golfo Santa Clara; 2011-2014)

HIGH EST. ILLEGALITY	2011	2012	2013	2014	%Δ 2013-2014	%Δ 2011-2014
Total Curvina Catch (Kg)	3,530,203 kg	1,847,902 kg	2,222,238 kg	2,437,364 kg	9.7%	-31.0%
Number of Pangas Landing in GSC	462 pangas	432 pangas	473 pangas	491 pangas	3.8%	6.3%
Avg. Catch per Panga	7,641 kg	4,278 kg	4,698 kg	4,964 kg	5.7%	-35.0%
Avg. Curvina Flesh Prices (2011 MXN/Kg)	$10.7 pesos/kg	$17.9 pesos/kg	$14.6 pesos/kg	$13.1 pesos/kg	-9.8%	22.7%
Avg. Curvina Buche Prices (2011 MXN/Kg)	$100 pesos/kg	$154 pesos/kg	$162 pesos/kg	$215 pesos/kg	32.5%	114.8%
Total Ex-Vessel Revenue (Buche + Flesh; 2011 pesos)	$46,723,985 pesos	$40,063,745 pesos	$40,143,026 pesos	$43,138,743 pesos	7.5%	-7.7%
Avg. Per Panga Revenue (Buche + Flesh; 2011 pesos)	$101,134 pesos/panga	$92,740 pesos/panga	$84,869 pesos/panga	$87,859 pesos/panga	3.5%	-13.1%