Submission to the Standing Fish Price-Setting Panel

SNOW CRAB FISHERY 2024

FFAW | UNIFOR

Fish, Food & Allied Workers

March 28, 2024

Introduction

In 2023, the snow crab fishery began at the price of $2.20 CAD per pound for harvesters. When both parties went to the Panel at beginning of the season, the Panel selected the ASP's final offer[1], taking into consideration the:

> [O]verall decline in Crab markets in the past year, inflation, financial instability in the US, significantly decreased demand in the market, increased quotas, and the significant probability that pricing trends will hold (i.e., that the price will continue to decrease at least until the substantial leftover holdings from the 2022 season have cleared and a demand is created in the market). (Page 11)

Today, the snow crab market is significantly different. Where last year the price of UB Section 5-8s was continuously declining and a significant amount of product from 2022 remained unsold in cold storage, these are not concerns for 2024. Today, the U.S. economy is growing and inflation is moderating. According to the *Crab Market Review* prepared by John Sackton, hereafter the Sackton Report (Appendix 1), today, a "'normal' year is within reach" with "no signs of a significant inventory problem" (page 11).

In addition to improved conditions entering the 2024 snow crab season, processing companies are in much better condition than they were the prior year. According to monthly export data and UB pricing, between June and September 2023, processors outsold the average UB 5-8 Market price, weighted by time of landing, by nearly $1.00 ($6.81 UB average vs. $7.76/lbs. export price), all while paying harvesters the lowest average price/lbs. since 2013. Meanwhile, a lower quota in the Gulf, as well as no Russian and Alaskan crab in the market, will continue to drive demand for Newfoundland snow crab.

When an agreement was reached to begin the season, it was done so under conditions that the province agree to "work towards a formula prior to the 2024 season."[2] As a result, the province assembled a strategic review team, including representatives of both the processing and fishing sectors, to assist with the development of a formula-based framework for price setting. The Report of Fish Price-Setting from the Strategic Review Team, hereafter referred to as the Blackwood Report (Appendix 2), was an important step towards ensuring a fair and equitable snow crab fishery in Newfoundland and Labrador. Chief among the Review Team's recommendations was that a formula be established prior to the start of the 2024 season so that harvesters and processors could share in both the risk and rewards of changes in the market.

The Blackwood Report's recommended formula was based on the premise that historic market shares could be used to guide future price decisions. As summarized by the Blackwood Report:

> If either the harvesters or the processors cannot cover their variable costs, then there is every likelihood that neither will participate in the activities of catching a given species or buying and processing that species. Where there is a history of activity by both parties, then there is likely to be an economic return for both beyond their variable costs. (Page 35)

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[1] https://www.gov.nl.ca/fishpanel/pricingdecisions/2023/2023-Crab-Fishery-Decision-April-6.pdf
[2] https://ffaw.ca/offer-signed-start-crab-fishery/

Put simply, if fishers fished and processors bought at this sharing arrangement in the past, it should be economically viable for both parties to do so again in the future, particularly in normal conditions, as they are projected to be this year.

When snow crab negotiations for the 2024 fishing season began, both the FFAW and Association of Seafood Producers (ASP) committed to negotiating not only a formula, but also the other aspects of formula-based pricing, including: the percent advance for the season as initial payment, terms of the settlement price, and other adjustments to the schedule governing the terms and conditions of sale. While the final offers exchanged between both parties agreed that the formula proposed in the Blackwood Report be used to determine the raw material price for crab, we were unable to come to agreement on many of the other components on the crab schedule.

The Formula

FFAW is not interested in contesting the historical sharing arrangement described and quantified by the Blackwood Report and the formula it proposed. We agree largely with the analysis of the Review Team, which considered 18 years of pricing decisions to identify a statistically significant formula that has high explanatory power. Consequentially, in our offer we use the formula specified on Page 45 of the Blackwood Report:

$$y = 0.0151x^2 + 0.2499x + 0.1714$$

Where y is the harvester crab price, and x is the average of the Tuesday and Thursday Urner Barry low price (UB Crab, Snow, Newfoundland, Cluster, 5-8oz) for the week of landings, converted to CAD$. The exchange rate used will be an average of the prior week, Sunday to Saturday.

 As the review team notes however, this formula is not adjusted for inflation, which means that it should be used with caution when considering pricing at both the lower and higher end of the price range. According to the Blackwood Report:

> *If we used the formula to apply to a low market price that was applicable 20 or so years ago, there is a high probability that it would not produce a workable price for crab because inflationary costs over that time would likely leave one or both parties with no margin and no incentive to harvest or process crab… We would strongly caution its application to established pricing at the lower or higher end of the pricing range without comprehensive review.* (Page 53)

With this cautionary note in mind, our offer stipulates that the formula be active for only values from $6.00 CDN to $15.00 CDN, and that both FFAW and ASP would be entitled to a reconsideration at market values outside of that range.

Adjusting for inflation, harvesters have not fished for under $2.00 since August 2010 (Figure 1). The starting price per pound in 2023, $2.20, was the lowest inflation-adjusted price since 2010, and was the sixth lowest price of the data the Review Team considered. Under these low prices, many harvesters faced extreme financial hardship and were unable to survive from the fishery last year[3]. Indeed, this price was so unsustainable to harvesters that a six-week tie up ensued until harvesters were paid a price representative of the actual market and their costs to operate. At $6.00 CAD, the Blackwood Report formula pays $2.21 to harvesters, which is one of the reasons we selected $6.00 CAD as the lower bound of the market for which this formula should be in effect, and that if the market goes lower FFAW and ASP will need to renegotiate a price.
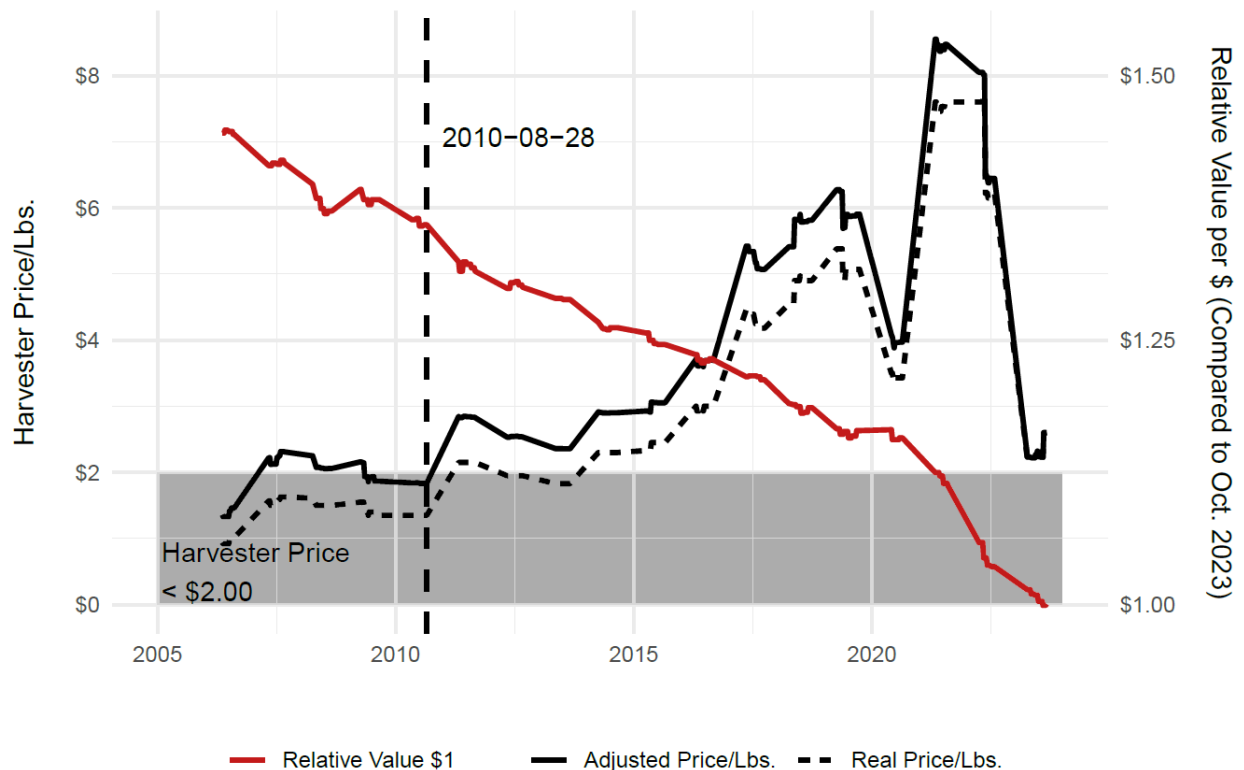
Figure 1

Figure 1: Time series of price to harvesters CAD adjusted for inflation. Red line represents relative value of $1.00 CAD compared to Oct., 2023. Inflation data from monthly Consumer Price Index, Bank of Canada.

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[3] https://www.cbc.ca/news/canada/newfoundland-labrador/crab-protest-legislature-1.6812725
https://www.cbc.ca/news/canada/newfoundland-labrador/crab-fishermen-price-waiting-1.6806873

During our negotiations, ASP proposed that the formula only be active for UB Market Values between $4.00-$12.00 CAD, yet, adjusted for inflation, the UB Market Price has never been below $4.60 CAD (Figure 2). Furthermore, inflation adjusted prices have only been below $6.00 for three weeks since 2010: twice in 2012 and once in 2013 ($5.97, $5.98, and $5.99 respectively). As such, we believe that using historical data to justify a price at values between $4.00 - $6.00 would fly in the face of the cautionary note of the Blackwood Report, just as ending the formula at $12.00 would ignore relevant data from 2017-2019.

Figure 2

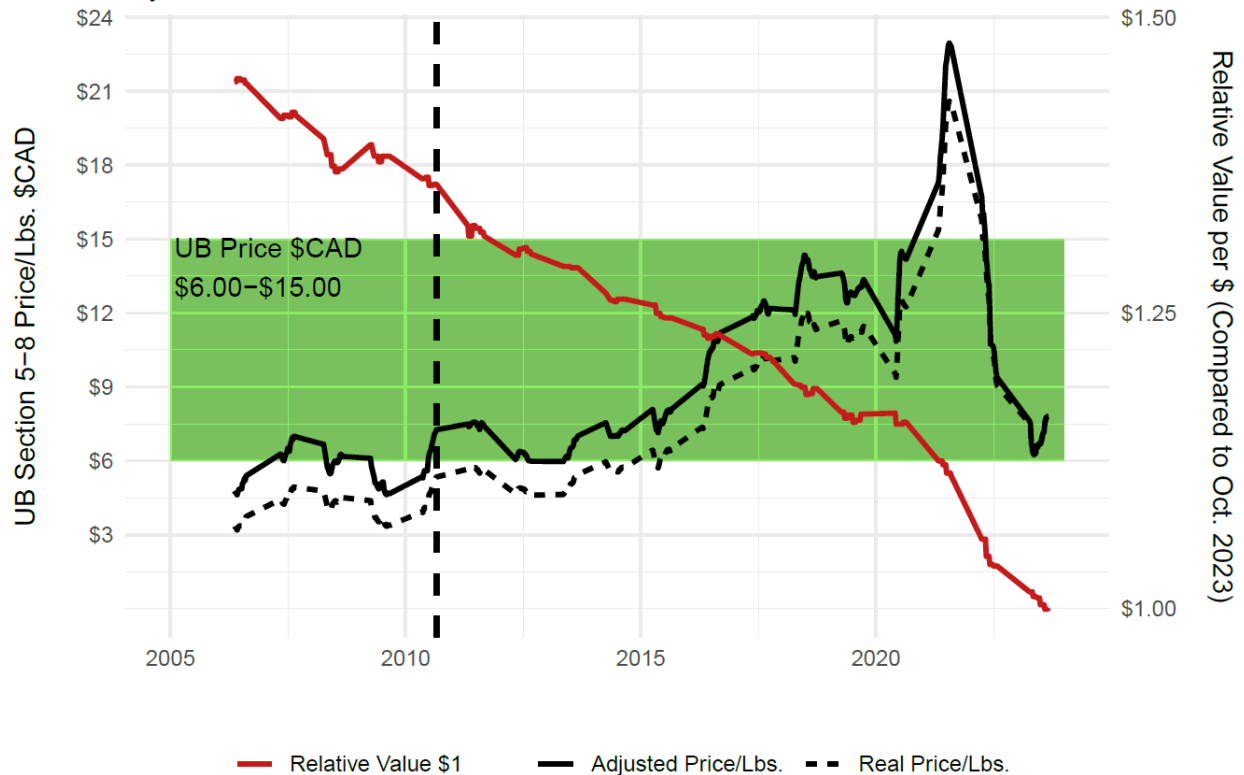### UB 5–8 Price/Lbs. $CAD
Inflation Adjusted vs. Real Price

Figure 2: Time series of UB Section 5-8 prices CAD adjusted for inflation. Red line represents relative value of $1.00 CAD compared to Oct., 2023. Inflation data from monthly Consumer Price Index, Bank of Canada.

Instead, we offer that the formula be in effect when the UB 5-8 price is between $6.00 - $15.00 CAD. Between these market values, the fit of the Blackwood Formula is incredibly strong, especially when ignoring 2020 and 2022, which, according to the Blackwood Report, represent outliers that had "little to no correlation between average UB market pricing and the crab price paid to inshore harvesters" (Page 41-42). Figure 3 shows the actual price paid to harvesters compared to what the Blackwood Report would pay them at the same time for UB market values of $6.00 - $15.00 CAD. Clearly, the model fit is very strong for every year outside of the Covid-19 years (2020-2022) and 2023.
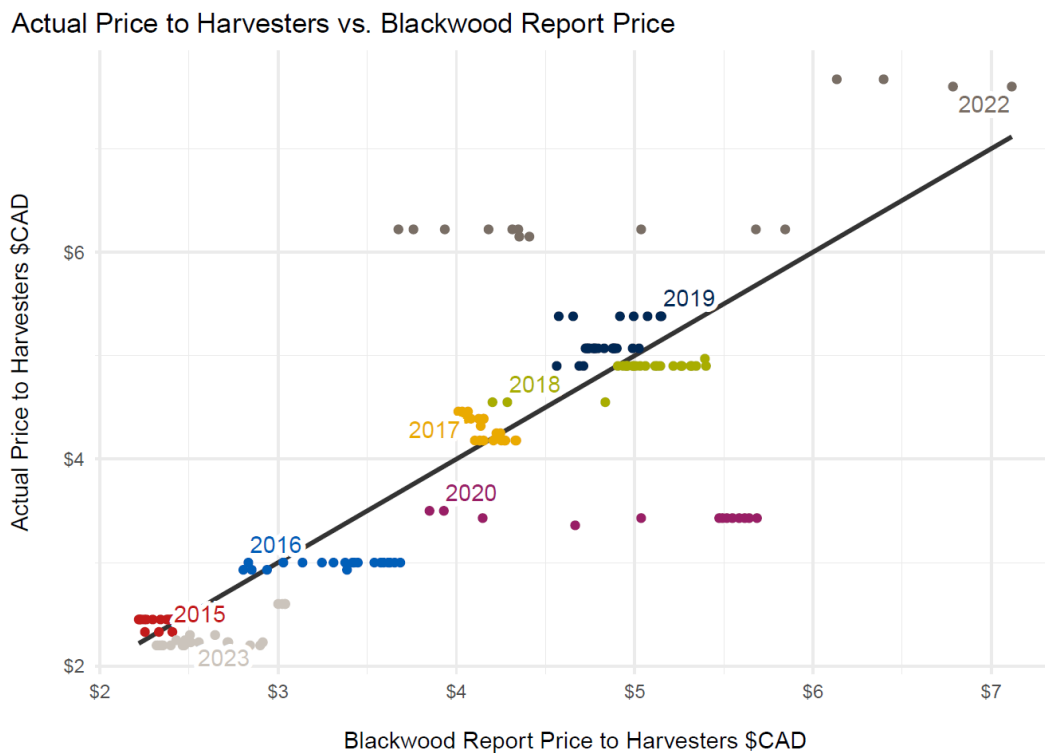
Figure 3

Figure 3: Actual price to harvesters versus Blackwood Report formula price to harvesters at same market values. Data from the Blackwood Report.

In 2023, the Blackwood Report would have paid $3.02, or $0.75 more than the $2.27 average price harvesters received, however in 2023 there was significant excess inventory from the prior year, and the market appeared to be declining. These pressures do not exist this year. According to the Sackton Report, the general "outlook for snow crab is for a healthy year because of lack of inventory," and this year's "outlook is favorable for a healthy crab market in both the US and Japan" (pages 56-57). This means that the factors that ultimately resulted in the Panel accepting a lower price offer are no longer at play, and that the 2023 price for snow crab should not be used to judge a price today.

In our offer, the final settlement price will be based on a representative sample of all 2024 snow crab products from the start of the fishing season through September 30 of the year, or four weeks after the season ends, whichever is later. Prices will be verified through an independent third-party company as agreed to by both parties.

Throughout our negotiations, ASP insisted that the final settlement price be determined by just sales of U.S. 5-8 Sections. Yet between 2006-2023, these sections only accounted for an average of 34% of total production, and have only accounted for over 50% of production twice, in 2021 and 2023 (Figure 4).

Figure 4

Proportion NL Snow Crab Production by Product Type
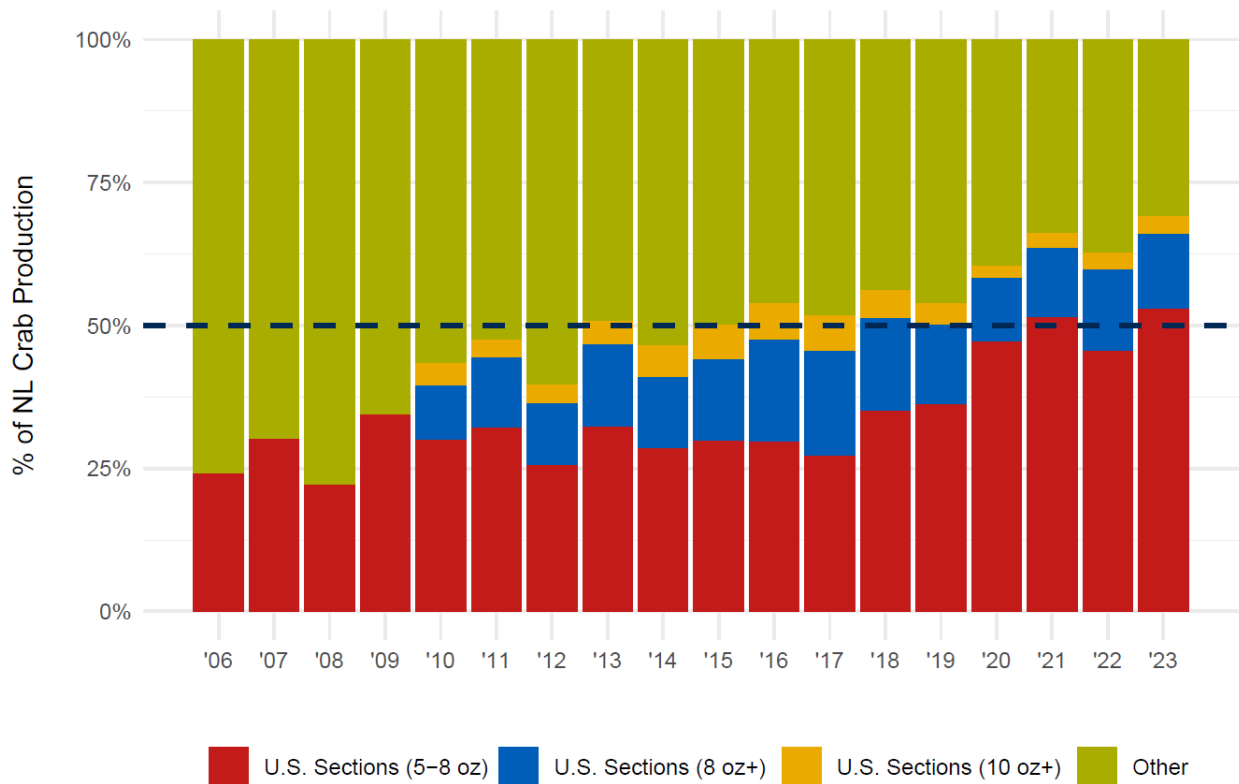
NL Department of Fisheries, Forestry and Agriculture

Figure 4: Proportion of NL snow crab by product type. Data from the FFA.

While the formula during the season uses the value of UB 5-8s, this is because there is no better proxy to estimate the value of Newfoundland snow crab. There is no legitimate reason that the final settlement price be determined by only a portion of the product we produce (Table 1) and basing the settlement price on all sales is the only way to ensure that both harvesters and processors truly share the risks and rewards of the market.

Table 1: Annual NL Snow Crab Production by Product Type

Year	1,000 KG of Production				% of Production			
	U.S. Sections (5-8 oz)	U.S. Sections (8 oz+)	U.S. Sections (10 oz+)	Other	U.S. Sections (5-8 oz)	U.S. Sections (8 oz+)	U.S. Sections (10 oz+)	Other
2006	7,800	-	-	24,374	24%	-	-	76%
2007	10,232	-	-	23,487	30%	-	-	70%
2008	7,905	1	-	27,616	22%	0%	-	78%
2009	12,333	4	-	23,425	34%	0%	-	66%
2010	10,376	3,328	1,319	19,515	30%	10%	4%	57%
2011	11,371	4,344	1,108	18,468	32%	12%	3%	52%
2012	8,756	3,648	1,135	20,479	26%	11%	3%	60%
2013	11,079	4,913	1,386	16,737	32%	14%	4%	49%
2014	9,661	4,214	1,876	17,996	29%	12%	6%	53%
2015	9,504	4,513	1,920	15,803	30%	14%	6%	50%
2016	8,393	5,005	1,809	12,922	30%	18%	6%	46%
2017	6,387	4,290	1,443	11,275	27%	18%	6%	48%
2018	6,789	3,138	966	8,450	35%	16%	5%	44%
2019	6,899	2,657	707	8,746	36%	14%	4%	46%
2020	9,950	2,373	447	8,304	47%	11%	2%	39%
2021	13,976	3,313	698	9,161	51%	12%	3%	34%
2022	16,016	4,972	1,043	13,054	46%	14%	3%	37%
2023	18,442	4,557	1,097	10,698	53%	13%	3%	31%

Data from NL Department of Fisheries, Forestry and Agriculture

Not only do U.S. Sections 5-8 oz comprise an average of only 34% of production over the past 18 years, but these sections are also increasingly less valuable relative to other sections (Figure 5). During the fishing season between 2013 and 2018, the average UB 5-8 oz price, weighted by volume of landings, was 91% of the average UB 8+ price and 84% of the 10+ price. From 2019-2023 however, the average price of UB 5-8 oz sections during the fishing season decreased by 11% relative to 8+ and 10+ sections, to only 80% and 73% respectively.

Figure 5

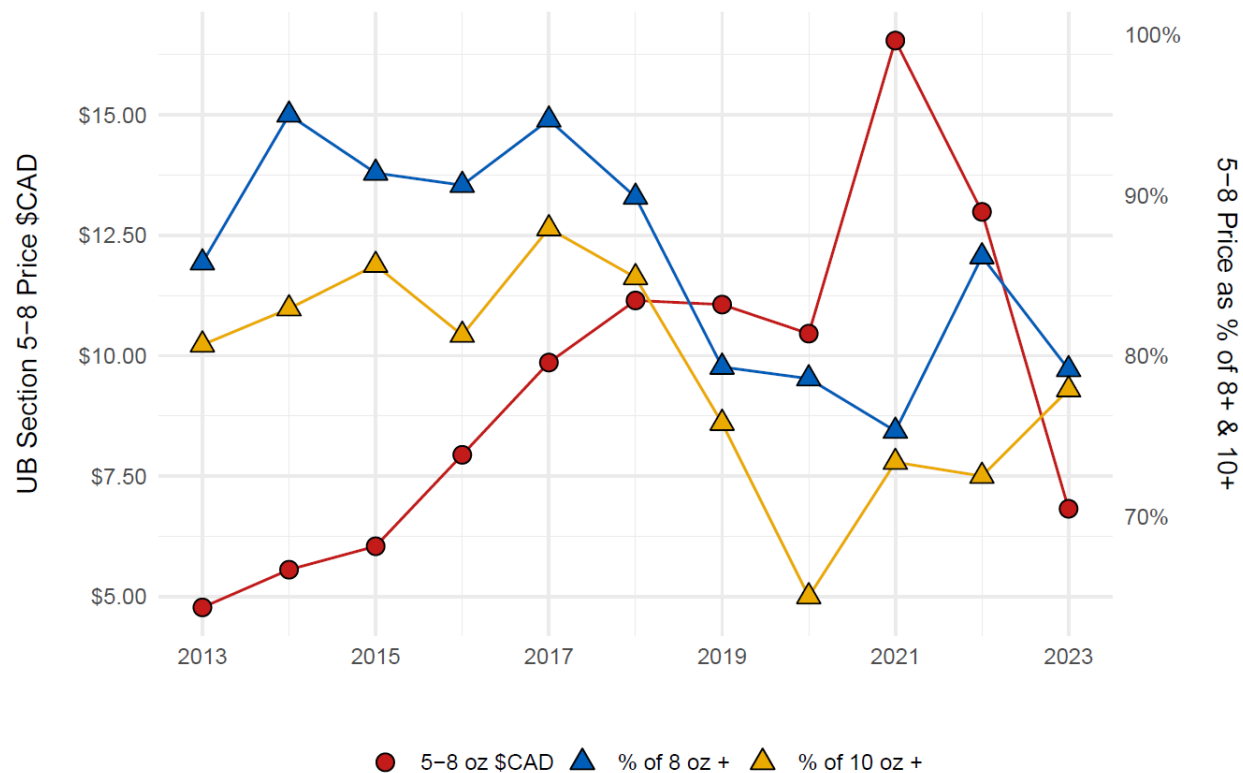Avg. UB Section 5−8 oz $CAD

Price & Percentage of Other Sections

Figure 5: Red dots represent average UB 5-8 Price $CAD on left y-axis. Triangles represent UB Price as a percentage of UB 8+ and UB 10+ sections, blue and yellow triangles respectively on the right y-axis. Data from Urner Barry.

According to the Sackton Report, 8+ and 10+ sections are the preferred products for foodservice and are "almost exclusively a foodservice item" (page 38). The report notes that major foodservice chains are experiencing growth that is driving demand for 8+ sections, and the spread between 5-8 oz sections and 8+ sections has increased from 47% to 57% since December. This contrasts with the report's outlook for retail sales, which are expected to maintain their current value and volume rather than bidding up prices. This means that the strongest markets for snow crab this year will likely be the larger sections (8+ and 10+), so any settlement price that does not include them would be deliberately underestimating the true value of snow crab in Newfoundland and Labrador (Table 2).

Table 2: Annual Average Price of UB Section Types

Year	Avg. 5-8 oz $CAD	Avg. 8 oz + $CAD	Avg. 10 oz + $CAD	Avg. 5-8 oz % 8 oz +	Avg. 5-8 oz % 10 oz
2013	$4.77	$5.55	$5.90	86%	81%
2014	$5.56	$5.84	$6.68	95%	83%
2015	$6.04	$6.60	$7.04	92%	86%
2016	$7.94	$8.75	$9.74	91%	82%
2017	$9.86	$10.39	$11.19	95%	88%
2018	$11.15	$12.38	$13.10	90%	85%
2019	$11.06	$13.91	$14.55	80%	76%
2020	$10.46	$13.27	$16.02	79%	65%
2021	$16.54	$21.90	$22.47	76%	74%
2022	$12.99	$15.04	$17.85	86%	73%
2023	$6.82	$8.59	$8.73	79%	78%

In-Season Average of UB Section Prices $CAD. Average weighted by weekly volume of snow crab landings, provided by DFO.

Another difference between our final position and ASPs position on settlement price is the period on which the settlement price would be determined. The Blackwood Report recommends that the settlement price be determined "when the season is over, and when much of the production has been shipped to market and sold" (page 48). It is FFAWs position that this point is September 30th, or four weeks after the season is completed, whereas ASP has insisted that the settlement period conclude at the end of the crab fishing season.

In a typical fishing season, the UB Section 5-8 price is generally highest at the start of the season, as described in the Blackwood Report:

> *The snow crab fishery, starting in April, has a tendency to have a higher opening price than when the bulk of supply enters the market. When the entire harvesting fleet becomes active round mid-May, and other Atlantic Canadian supply is also coming on stream, market prices have the tendency to decline.* (Page 21)

The Sackton Report identifies a similar trend. Noting that in the past 25 years when prices have been stable or rose prior to the season in December and March:

> *[E]ach subsequent season has followed a traditional pattern where the lowest prices for the year occur around the end of May at a point when half the expected production has been landed. Once the season ends, prices usually firm, and sellers are able to recover the additional costs of storage and financing for the rest of the year.* (Page 48-49)

This is the trend this year, where UB Section 5-8 prices increased from $5.30 - $5.45 USD from January 1 – January 22, and have remained at $5.45 USD since.

Figure 6 depicts the common trend of normalized UB Section 5-8 prices from April-September, based on data from 2013-2023. In this figure, a normalized price of one indicates that the price was at its highest point of the season during that week, whereas a value of zero indicates it was at its lowest point. This trend was calculated using a model that assumes a consistent trajectory with

equal variance each year[4]. The points in the figure indicate historical values and the blue line and ribbon represent the predicted trend and 95% confidence interval respectively. It is clear that there is a common trend across each year.
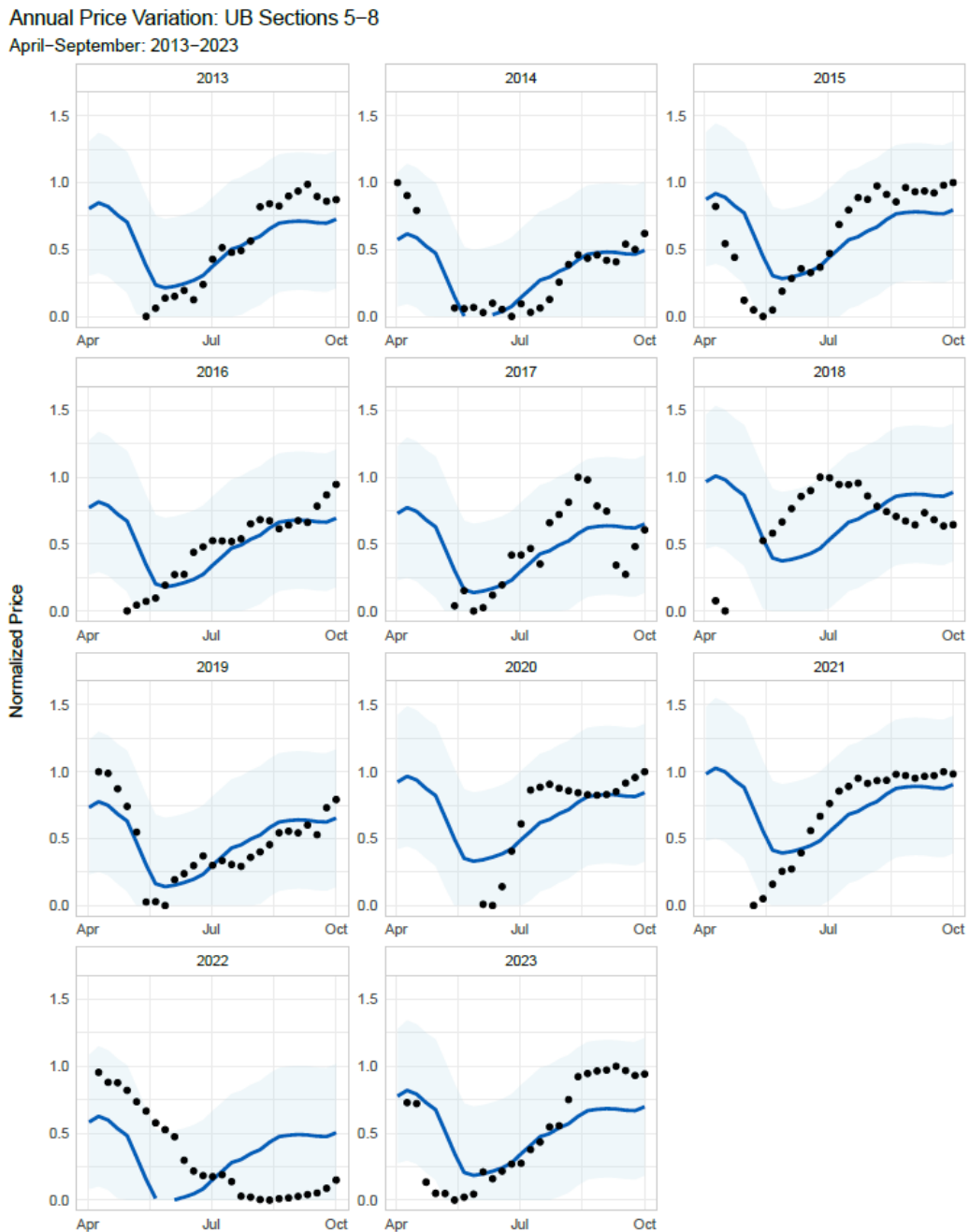
Figure 6

Figure 6: Normalized UB Section 5-8 Price compared to modelled trend. Value of one indicates highest price during period whereas value of zero is lowest price during period. Data from Urner Barry.

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[4] https://cran.r-project.org/web/packages/MARSS/vignettes/UserGuide.pdf

This trend also means that crab prices tend to be lowest during the bulk of both harvesting activities and seasonal exports. Figure 7 shows the modelled market trend compared to the normalized average of monthly export weight and landed weight (2013-2023), where again a value of one indicates the highest annual landings/exports and a value of zero indicates the lowest. The figure clearly demonstrates the relationship described in both the Sackton and Blackwood Report, where the bulk of harvesting occurs during the lowest market rates. The figure also shows a clear relationship between monthly landed values and monthly exports. Generally, exports peak in June, one month after landings peak in May. As landing decrease, exports the following month also decrease and so on.
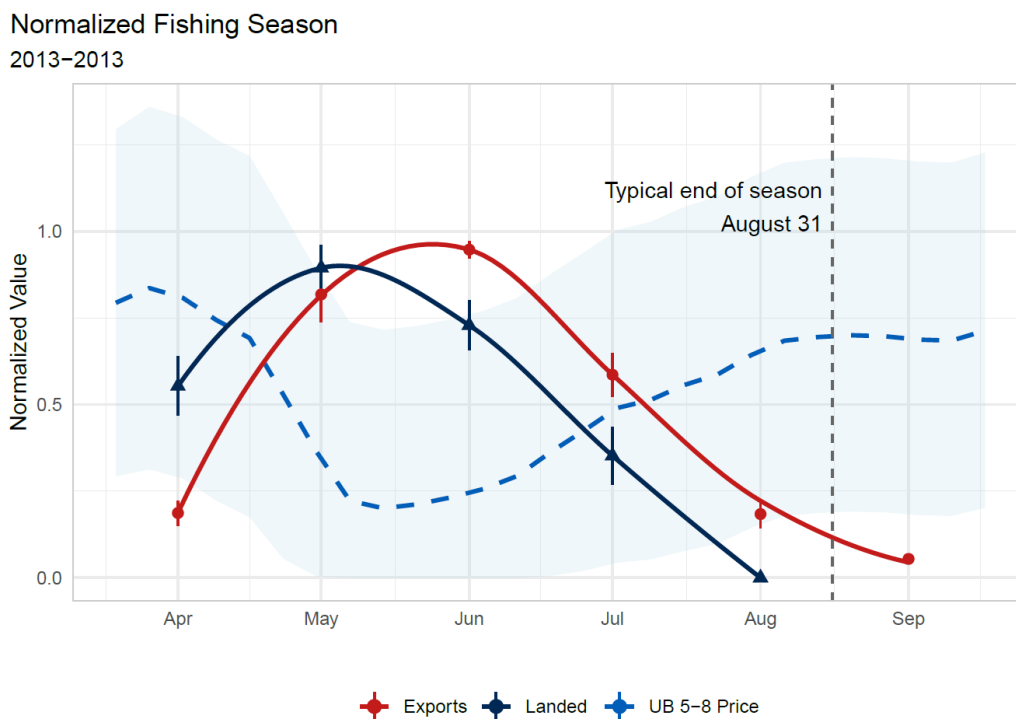
Figure 7

Figure 7: Plot of average trend of UB 5-8 price, export volume, and landed weight. Normalized value of one means highest value within year, value of zero means lowest value within year. Data provided by NL FFA, DFO, and Urner Barry.

During our negotiations, ASP argued that the settlement window should end at the end of the season, as processors should not have to pay if they decided to take on additional risk by storing crab for sale later in the season. However, the data does not indicate that this is the case. In fact, comparing the normalized landings to normalized monthly exports the following month (i.e., May landings compared to June exports) shows that landings in one month are highly correlated (Figure 8). This means that the landings in one month have the ability to predict the exports the following month, or that processors are not holding onto product until later but are rather trying to sell it quickly. If the settlement period only included the fishing season, it is much more likely the result would be harvesters not getting paid for their end-of-season crab rather than harvesters benefiting

from processor risk. A similar trend has been noted in lobster where some of the most profitable sales occur just after the season is over.

Figure 8

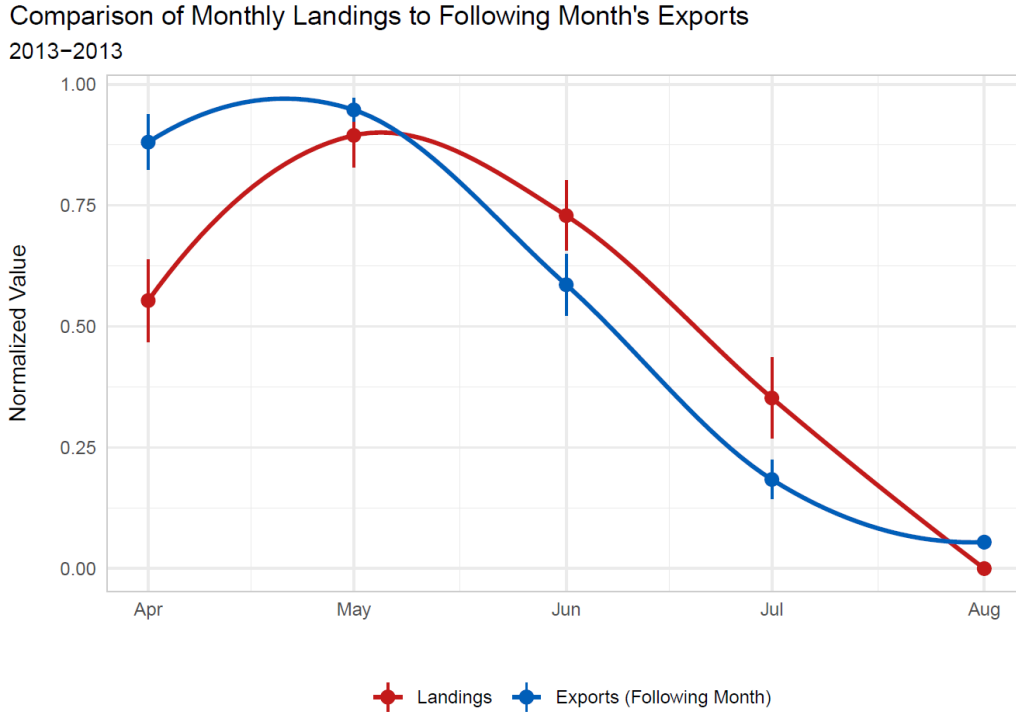Comparison of Monthly Landings to Following Month's Exports
2013–2013

Figure 8: Normalized landings vs. normalized exports the following month. Normalized value of one means the highest value within year, value of zero means lowest value within year. Data provide by NL FFA and DFO.

Initial Payment Structure

The Blackwood Report recommends an initial payment structure that pays 80 percent of the formula to allow for the sharing of risk throughout the season. The report argues that this approach would ensure that all harvesters are paid the same price per/lbs. at the end of the season, regardless of when they landed their crab. This would also allow the sharing of risk between harvesters and processors should the market decrease significantly or the UB 5-8 minimum price overestimate the actual value of the product. However, as noted previously, many harvesters cannot sustain their enterprises, or even cover the most operational costs associated with fishing, when being paid less than $3.00/lbs. To then withhold an additional 20% of that low payment as a means of distributing risk would be a fundamentally unworkable solution.

Instead of a flat 80% initial payment, FFAW's consistent position throughout negotiations has been a sliding scale payment, where the initial percentage to harvesters decreases progressively over a fixed range. ASP similarly adopted this approach in their final offer exchanged with us. Such an approach is beneficial because it still adjusts with the market while providing an initial margin for both parties to operate. In this offer, we propose that the percentage of initial payment upfront decreases from 100% to 80% between $3.00 to harvesters (UB $7.71 CAD) to $4.18 CAD ($10.00

CAD) (Figure 9). Under this arrangement, harvesters would accept that if the final price/lbs. of crab never exceeds the average UB price during the season, their final price/lbs. would be dependent on the time of their landings, however we view this tradeoff as acceptable in order to maximize initial payment at lower market rates when every cent is needed to sustain an enterprise. This is a similar arrangement at the lumpfish roe fishery, described in the Blackwood Report, where a settlement is made in the fall when market prices exceed an established threshold.
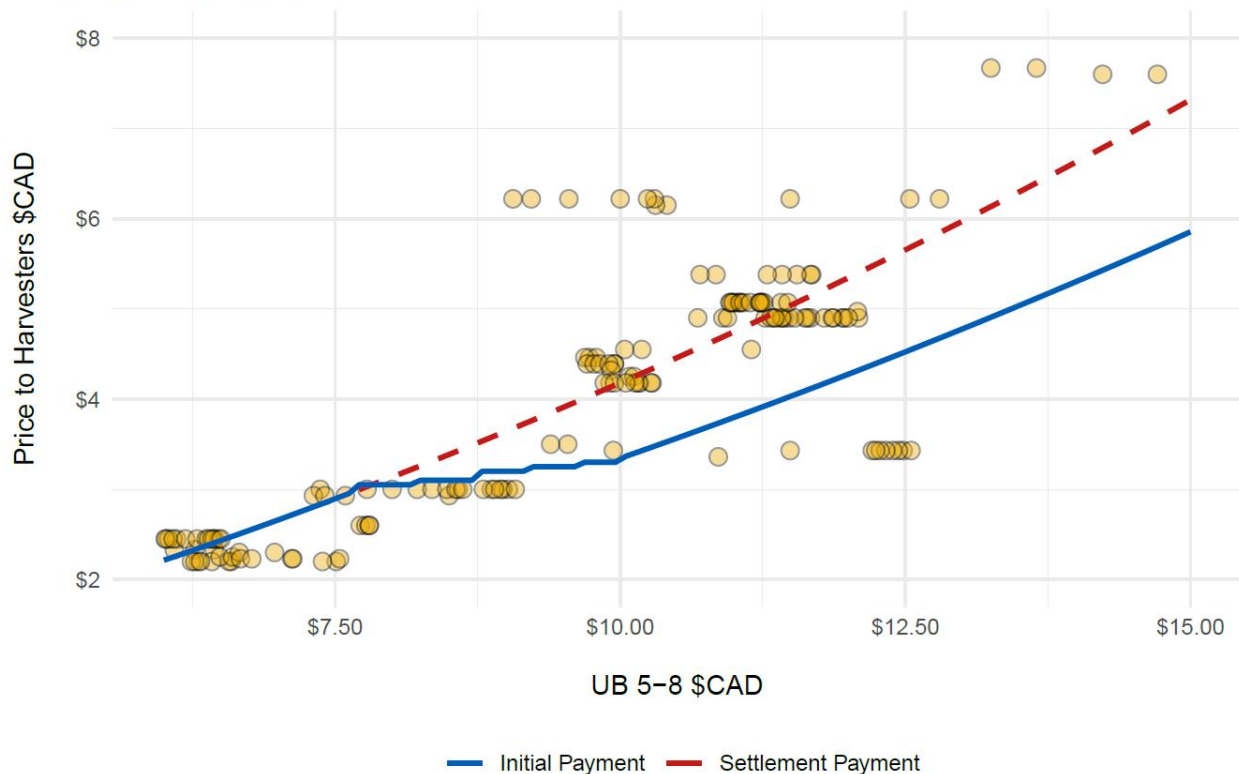
Figure 9

Figure 9: FFAW final formula offer. Blue line represents initial payment structure, red dashed line represents final settlement payment, and yellow dots represent previous prices at market values. Data from the Blackwood Report.

Under this approach, harvesters would be paid 100% of the Blackwood Formula between UB market rates of $6.00 and $7.70 CAD, or between $2.20 and $3.00 to harvesters (Table 3). After the market reaches $7.70 CAD, harvesters would be paid along $0.25 steps with the Blackwood Formula. When the Blackwood formula would pay harvesters between $3.01 and $3.25 (UB Market $7.71 - $8.22 CAD), harvesters would be paid $3.05, which results in a 98% initial payment on average throughout that price step. Between $3.25 and $3.50 to harvesters (UB Market $8.23 - $8.72 CAD), harvesters would be paid $3.10 upon landing, an average of 92% upfront. Between $3.50 - $3.75 ($8.73 - $9.20), harvesters would be paid an initial payment of $3.20 (88%), and between $3.75 and $4.00 ($9.21-$9.67) harvesters would be paid an average of 84% upon initial

payment, or $3.25. Finally, between $4.00 and $4.18 ($9.68-$10.00) harvesters will be paid $3.25 (81%). Once the UB 5-8 market price is greater than $10.00, harvesters will be paid an initial payment that is 80% of the final price as described by the Blackwood Formula. A full payment table at every market rate is available in Appendix 3.

Table 3: Final Offer Sliding Scale

Min. UB 5-8 Price $CAD	Max UB. 5-8 Price $CAD	Min. Final Payment	Max Final Payment	Initial Payment	Initial Payment Percentage
$6.00	$7.70	$2.21	$3.00	-	100%
$7.71	$8.22	$3.00	$3.25	$3.05	98%
$8.23	$8.72	$3.25	$3.50	$3.10	92%
$8.73	$9.20	$3.50	$3.75	$3.20	88%
$9.21	$9.67	$3.75	$4.00	$3.25	84%
$9.68	$10.00	$4.01	$4.18	$3.30	81%
$10.01	$15.00	$4.19	$7.32	-	80%

Initial payment structure proposed by FFAW. Minimum UB Price and Maximum UB Price refer to market rates at which each initial payment is made. Initial Payment % is average of initial payment at that step.

In addition to ensuring sustainable revenue to harvesters at low market rates, when money is especially tight, the sliding scale approach is also a more equitable distribution of risk at low market rates. One of the outcomes of the formula described in the Blackwood Report is that harvesters accept a lower market share at lower market rates. This is largely a function of historical pricing decisions, as described by the Blackwood Report:

> *At lower market prices, the percentage of the net return accruing to both parties varied. As market return declined, the share to the harvester decreased and the processor increased. While as the market returns increased, the market share to harvesters increased and the processor decreased... The quadratic formula is a curved line, as it recognizes a shift in the sharing of market returns as market prices increase.* (Page 43)

This was likely due to greater perceived risk to processors at low market rates. As the Blackwood Report specifies (Page 35), "profit to both parties at varying market returns that should be based on risks." The higher share to processors at low market rates is a result of risk management for processing companies. Put another way, risk is already divided at low market rates, even when there is no holdback to account for possible volatility: that volatility is accounted for in the final sharing arrangement.

At lower market rates, raw material prices for processing companies comprise a smaller portion of their expenses, and therefore a smaller percentage of their sales, resulting in a greater margin ratio—or higher relative profitability. This means there is significantly less risk for companies at low prices to harvesters. It also means that harvesters are already carrying the bulk of risk at the low

market end: to holdback 20% of initial payment at these rates would add an additional burden to harvesters who are already receiving a lower share of the market at these values.

To illustrate, we estimated processing companies' margin ratio as the export price per pound from the start of the fishing season through September (multiplied by a conversion factor of 65% from live weight to yield weight, as per the Blackwood Report page 56) minus the price paid to harvesters divided by the export price per pound converted to yield weight (Table 4). Unsurprisingly, we found a very clear relationship between the profit margin and the price to harvesters. Between 2013-2023, when the price to harvesters was less than $4.00 CAD, processors averaged 44% profit margins. During the same period, when the price to harvesters was greater than $4.00, processors averaged 28% profit margins. It is notable that under our offer as proposed, the margins would be extremely similar at values less than $4.00 to harvesters. It is also worth highlighting the similarity our proposed offer has to the 2016 price, where FFAW and ASP came to an agreement on price.

Table 4: Estimated Margins of Export Price vs. Raw Material Price

Year	Export Price/Lbs	65% Export Price/Lbs.	Raw Material Price	Margin	FFAW Offer Final Price	Margin
2013	$5.09	$3.31	$1.83	45%		
2014	$5.57	$3.62	$2.30	37%		
2015	$6.17	$4.01	$2.43	39%	$2.29	43%
2016	$7.71	$5.01	$2.98	41%	$2.99	40%
2017	$9.58	$6.23	$4.39	30%	$3.95	37%
2018	$10.95	$7.12	$4.76	33%	$4.72	34%
2019	$11.41	$7.41	$5.21	30%	$4.99	33%
2020	$10.02	$6.51	$3.46	47%	$4.19	36%
2021	$15.45	$10.04	$7.55	25%		
2022	$14.09	$9.16	$6.88	25%	$6.69	27%
2023	$7.76	$5.04	$2.27	55%	$3.02	40%

Final Export Price/Lbs of snow crab from season start through September vs price to harvesters. Data provided by Government of NL, DFO, and Blackwood Report.

Similarly, there is significantly less monetary risk for processing companies at low market rates. In 2016, the final export price was only 97% of the average UB 5-8 market price throughout the fishing season, or a difference of $0.23 (Table 5). Companies knew the risk at this market price and were comfortable with a price of $3.00/lbs. to harvesters, resulting in a successful fishery. In 2020, when the market was significantly higher, the final export price was 96% of the UB market price, resulting in a $0.43 difference. A percentage of a large number is greater than the same percentage of a small number. As the market increases, the potential losses to processing companies also increase, but at low rates the monetary risk is much lower. Paying 100% upfront at low market rates has both lower monetary risk if the final export price decreases, and is risk is already hedged by the profit margins at low market rates (Table 4). Moreover, the very nature of the formula provides a higher market share to processing companies at lower market rates, adding an additional cushion to processors at these low market values.

Table 5: Final Export Price. of Snow Crab vs. Average UB 5-8 Price

Year	Average UB Price	UB Standard Deviation	Final Export Price	Export Price as % UB	Difference
2013	$4.78	$0.15	$5.09	107%	$0.31
2014	$5.56	$0.03	$5.57	100%	$0.01
2015	$6.02	$0.19	$6.17	103%	$0.15
2016	**$7.93**	**$0.52**	**$7.71**	**97%**	**-$0.23**
2017	$9.85	$0.14	$9.58	97%	-$0.27
2018	$11.15	$0.82	$10.95	98%	-$0.20
2019	$11.06	$0.29	$11.41	103%	$0.35
2020	**$10.45**	**$1.14**	**$10.02**	**96%**	**-$0.43**
2021	$16.92	$1.66	$15.45	91%	-$1.47
2022	$12.52	$1.88	$14.09	113%	$1.57
2023	$6.81	$0.37	$7.76	114%	$0.94

Final Export Price/Lbs of snow crab from season start through September vs average UB 5-8 price, weighted by time of landings. In season UB Standard Deviation also listed. Data provided by Government of NL, DFO, and Urner Barry.

To test our proposed approach, we compared the final export price per pound from the beginning of the crab fishing season through the end of September, as specified above, to the Average UB Section 5-8 Market price during the season, weighted by the volume of weekly landings based on data provided by DFO from 2015-2020 and 2022-2023, the years where market rates were within the range for which we propose the formula be in effect (Table 6). During the season, the average initial payment to harvesters would be based on the sliding scale proposed at the average market price, whereas the final payment would come from the Blackwood Formula at the final export price/pound, the best proxy value we have for all sales. In every year but 2016, processors would not have overpaid harvesters relative to the final agreed upon payment, and in 2016 the difference was only $0.06/lbs. In 2016, this was a risk companies were willing to accept, as represented by their agreement with FFAW.

Table 6: Simulated Results of FFAW Final Offer Payment Structure

Year	Avg. UB Price	Max. UB Price	Final Export Price	Avg. Initial	Max. Initial	Final	% Landed @ Max	Diff. Avg. vs. Final	Diff. Max. vs. Final
2015	$6.02	$6.48	$6.17	$2.22	$2.42	$2.29	1%	$0.07	-$0.13
2016	$7.93	$9.02	$7.71	$3.05	$3.20	$2.99	1%	-$0.06	-$0.21
2017	$9.85	$10.28	$9.58	$3.30	$3.47	$3.95	1%	$0.65	$0.48
2018	$11.15	$12.09	$10.95	$3.87	$4.32	$4.72	6%	$0.85	$0.40
2019	$11.06	$11.67	$11.41	$3.83	$4.12	$4.99	3%	$1.16	$0.87
2020	$10.45	$12.55	$10.02	$3.55	$4.55	$4.19	3%	$0.65	-$0.36
2022	$12.52	$15.13	$14.09	$4.54	$5.93	$6.69	6%	$2.16	$0.77
2023	$6.81	$7.80	$7.76	$2.58	$3.05	$3.02	2%	$0.44	-$0.03

Simulated results of FFAW offer initial payment structure. Data provided by Government of NL, DFO, and Blackwood Report.

We also examined what would happen if a harvester landed all their crab at the highest market price of the season. Here, we found that if a harvester landed 100% of their crab when the UB market price was the highest, the initial payment would be greater than the final settlement payment in only three of the eight years. However, during these years only an average of 1.5% of total landings occurred during those weeks, meaning that it is highly unlikely this is a real risk to processors. Moreover, in 2020, using our proposed sliding scale approach the initial payment at these maximum rates is already 80% of the final, as suggested by the Blackwood Report, meaning that this risk would exist even if using a flat 80% initial payment.

Quality Provisions

During the negotiations for the 2024 season, ASP introduced several quality-based measures to the snow crab schedule, including dropping the tolerance for undersized crab and imposing monetary deductions for overfilled pans and temperature violations. Though at the time of writing it is unclear if ASP's final offer will include these deductions, throughout the negotiations ASP argued that these were both (1) recommended by the Blackwood Report, and (2) necessary to ensure the quality of snow crab entering the market. The recommendations relating to quality (recommendations number six and seven, Blackwood Report pages 60-61), are quoted below:

6. The Review Team has concluded that the current structure of fish pricing setting is not conducive to maximizing the inherent value of the resource. There is significant economic opportunity to be gained from a market-based approach driven by a focus on improving the quality of the harvest and the products produced.

7. The Review Team repeats the recommendations from a number of prior reports that fish prices reflect the inherent market value of products produced in the industry. As noted in our report, market value for most all species is a function of size and quality characteristics. These attributes are best determined through independent dockside grading that correlate and reward attributes that give rise to increased market returns that can increase and improve the long- term viability of the entire industry. There is much more to share when value is maximized. The industry needs to establish clear and attainable goals over the short and long-term. These should be empirically measured and the benefits shared as gains and milestones are achieved.

Before addressing the individual deductions proposed by ASP, it is worthwhile to address the premise on which they were proposed. While it is true that the Blackwood Report recommends measures to maximize quality, these measures do not include any financial deduction based on poor quality. Recommendation six simply states that the current structure of fish price setting is not conducive to maximizing quality, while recommendation seven suggestions establishing quality goals within the industry, a recommendation that the FFAW fully supports.

To the point of market-based approaches to incentivize quality, a formula-based system is by itself a market-based solution to improve quality: harvesters will see a higher final settlement at the end of the season with higher quality crab being sold, as stated in recommendation number seven. The formula provides a carrot to encourage quality—there is no reason to introduce a stick.

Recommendation seven helpfully notes that quality is a concern of the entire industry, and thus must be attended to by the entire industry. Quality also depends on processors, and a risk-sharing framework relies on both parties to maintain quality. The proposed deductions assume that harvesters are the only party responsible for crab quality, when it is well demonstrated that processing companies have mishandled crab as well. According to data from the Department of Fisheries, Forestry and Agriculture, NL processors dumped five times as much crab in 2023 as they did in 2022, increasing from 59,239 lbs. to 303,202 lbs. [5]

The deductions proposed by ASP assume that harvesters are alone responsible for the quality of the product, yet harvesters report that truckloads of crab were left sitting in hot summer temperatures while waiting to be processed last year. Moreover, there is no feasible mechanism for harvesters to recoup value from the processing companies if they are responsible for poor quality crab, even if the processors' mishandling eventually costs the harvester money in the final settlement payment. A financial penalty only applicable to harvesters in a system that relies on shared responsibility puts an undue burden on harvesters and violates the premise of shared risk on which *any* formula is based.

In addition, both harvesters and processors are currently regulated by NL's Department of Fisheries, Forestry and Agriculture (FFA) via the Fish Inspection Act. This Act promotes proper handling, transport, and quality protections for all fish products in the province and gives Government Inspectors authority to penalize those that break the conditions (Appendix 4). It is the FFAW stance that harvesters shall not be subject to penalties from two separate entities trying to enforce the same regulations.

Finally, as mentioned in the introduction, the formula used to determine pricing is based on historical pricing analysis, and thus historical schedules—none of which included significant quality deductions like the ones proposed by ASP (Appendix 5). To add a deduction here would again violate a core assumption of the formula: market sharing arrangements from the past cannot be used to determine future prices if the conditions of sale have radically changed. Quality deductions would either require more labor from harvesters or punish them with lower financial return. Either way, this would mean that harvesters are no longer receiving the same market share for the same amount of labor, which is the very relationship on which the Blackwood Report formula relies.

In summary, the formula is already a market-based incentive for quality, and the deductions proposed by ASP violate two core tenants of a risk-sharing formula. As a result, we propose using a similar schedule as was used in 2022—the last year both parties followed the schedule on conditions of sale—with one exception that will be described in the following subsections. Here, we also detail arguments against the specific quality deductions that were included in ASPs last offer, which we assume are included in their report to the Panel.

Undersized Crab Tolerance

It is the position of FFAW that there is still a 20% tolerance for legal, undersized crab (3 ¾" – 4"). This means the first 20% of legal sized crab less than 4" in each landing will be paid at the price for greater than or equal to 4" crab, and all legal sized crab less than 4" greater than 20% of the

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[5] https://www.cbc.ca/news/canada/newfoundland-labrador/crab-dumping-increase-2023-1.6979682

shipment will be paid $0.30 less. This tolerance was always adhered to from 1998-2022, until in 2023 ASP failed to recognize this tolerance having not ever formally signed the crab schedule for that year or ever bringing tolerance up in negotiations. The failure for ASP to recognize this tolerance in 2023 is currently pending arbitration. In historic pricing decisions, the tolerance for undersized legal crab impacted the final agreed-upon minimum price, as the tolerance was considered in pricing decisions and the minimum price was set to incorporate legal sized crab less than 4 inches.

It is the position of FFAW that this tolerance should remain included, as it was an important consideration in past price points which are today being used to evaluate future prices. If the past price accounted for a percentage of undersized crab, then any price offer without this tolerance should pay more because the product will be on average higher value per pound. It is further our position that this tolerance is for the benefit of the entire industry, not just fish harvesters. A tolerance of 20% for undersized crab benefits the health of the crab stock by discouraging high grading, or discarding undersized crab, which may cause unaccounted for mortality in the stock and would result in a higher fishing mortality that would not be captured by landings[6]. ASP recognizes this value, as they included lack of high-grading as a component of their MSC certification application for the snow crab fishery (Appendix 6).

Critically Weak & Reject Crab

Both FFAW and ASP's exchanged offers have included a 5% tolerance for critically weak crab subject to adequate quantities of ice being provided by companies, as has been done historically. In our 2024 offer, we have slightly amended the language of this schedule paragraph to read:

> Subject to paragraph 5, there will be a tolerance of 5% for critically weak crab, i.e., the first 5% of critically weak crab in each landing will be paid as per the price schedule. All critically weak crab in excess of 5% will be reject crab, *if determined to be dead*.

with the only change being the addition of the clause "if determined to be dead." Critically weak crab are processed and sold by fish processing companies. The previous wording of the paragraph enables processing companies to reject an excess of 5% critically weak crab while still processing and selling them—essentially receiving free crab from the harvesters. While we are not aware of this having occurred, in 2023 fish harvesters reported being paid less than the legal minimum price for 4" critically weak crab in excess of 5%.

The addition of the "if determined to be dead" clause is simply a preventative addition ensuring that companies cannot reject crab that they will be processing and selling. There was a similar provision in the 1997 snow crab schedule (Appendix 5), where the paragraph read "dead and critically weak crab will be reject crab except in a situation where critically weak crab is to be processed at the point of landing, in which case it will be acceptable" was added to ensure that harvesters were paid for all their crab that was processed. The following paragraph in the schedule implemented the 5% tolerance for critically weak crab.

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[6] https://www.dfo-mpo.gc.ca/fisheries-peches/ifmp-gmp/snow-crab-neige/2019/index-eng.html#toc7.3.9

Overfilled Pans

During negotiations, ASP included several new deductions in the schedule. Paragraph 11 of ASP's offer on March 15, 2024, implemented a deduction based on average pan weight at landing. If a harvester's average pan weight at landing exceeded 50.6 lbs. (23 KG), the maximum allowable weight per pan as stipulated in Section 24(1)(h) of the Fish Inspection Operation Regulations, the harvester would be deducted $0.035/lbs. for every 1 lb. of overage. If a harvester's average pan weight was 52.6 lbs. for example, the entire load would be deducted $0.07/lbs. Under the proposed deduction, the average pan weight would be determined by dividing the net weight of crab offloaded at landing by the total number of pans filled.

We are opposed to this deduction for several reasons. NL's Department of Fisheries, Forestry and Agriculture already has the authority to penalize those who break the conditions of the Fish Inspection Operation Regulations. Under the Regulations, harvesters can be fined $300 for the first offence, and $400 and $500 for the second and third violations. ASP's proposal to impose penalties on harvesters for exceeding the box weight has the potential to levy two financial impacts to harvesters for the same offence. It is our stance that the province is responsible for enforcing these regulations (Appendix 4) and it is not appropriate for the crab schedule to potentially add a second penalty. We also further emphasize our previous argument that any new quality deductions would either require more labor from harvesters or punish them with lower financial return for the same amount of labor, which violates the premise of any potential formula based on historic data.

We also note that overfilled pan violations are often outside of the harvesters' control. It is not uncommon for a processing company to hire a crew to unload crab. Processing companies are also responsible for providing pans at the wharf. If the company's hired crew unloaded the boat and overfilled the pans, or if the company failed to provide enough pans at the wharf, a harvester might be penalized for the processing company's actions under this new schedule item. Crab is also frequently transported in bulk, i.e., unloaded quickly in pans and then immediately moved into bulk storage. In these situations, a harvester would be subject to a penalty for overfilled pans even when the pans were only loaded to move the crab from the boat into bulk storage. This same situation might arise when landing crab directly at a plant, where pans are used only to move the crab from the boat and into the processing plant. In these situations, overfilled pans do not jeopardize the quality of the product, and therefore the deduction would not be incentivizing quality as intended, but rather an easy way to reduce the price paid to harvesters.

Temperature

The other new deduction included in the schedule of ASP's offer on March 15, 2024, imposed a $0.25/lbs. deduction for the entire load if a number of pans were found to be greater than 4°C. While we have not yet seen the final offer from ASP at the time of writing, the deductions proposed in the March 15th offer specified that IDG will undertake temperature sampling and:

- For loads less than 3,000 pounds, a minimum of 2 pans will be sampled and the temperature of each will be recorded. If 1 of the 2 temperature readings recorded is >4°C, the load will be subject to a $0.25 deduction applied to the raw material price.

- For loads greater than 3,000 pounds, 5% of the pans will be sampled and the temperature of each will be recorded. If 3 temperature readings of >4°C are recorded from the sample size, the load will be subject to a $0.25 deduction applied to the raw material price.

As with the overfilled pan deductions, we argue that this provision is not appropriate when it is already regulated by the FFA (Appendix 4), and that it again violates the assumptions on which any formula is based. We also note however that this deduction is duplicative with provisions already in the schedule. Under the current wording of the critically weak and reject crab tolerance, companies can reject an excess of 5% of critically weak crab. When crab overheat, they become critically weak and may die. Under the wording of this provision, this could result in a situation where an excess of 5% of critically weak crab are rejected and harvesters are then paid $0.25/lbs. less for the healthy crab and weak crab less than 5%.

In addition to this consideration, we argue that both the wording and financial penalty associated with this deduction far exceed the goal to incentivize quality. While we do not yet know what ASP's final offer is, the wording in the March 15th offer provides ample opportunity for processors to 'fish for a deduction.' For loads less than 3,000 pounds, a *minimum* of two pans suggests that any number of pans could be sampled and if only one was greater than 4°C a penalty could be applied. For loads greater than 3,000 lbs., the wording says that 5% of pans will be sampled. Under the trip limits for all fleets in April, this means that over 1,400 pans would be sampled from a harvester landing 75,000 lbs. If only three temperature readings were over 4°C, the harvester would be paid $18,750 less. It is FFAW's position that not only are these penalties outside the scope of the crab schedule, but also that the wording and severity of these deductions are not intended to incentivize quality but rather to dramatically reduce the price paid to harvesters.

Barnacles

The final point of disagreement of the offers exchanged between FFAW and ASP during negotiations relates to the barnacle provision. Under ASP's suggested barnacle provision, the weight of each shipment will be reduced by .32 times the percentage of the total shipment which is heavily infested by barnacles. In our offer, we retained the .24 multiplier that had been in previously agreed upon crab schedules. In practice, this provision is essentially saying that for each pound of heavily infested crab caught, .24 (or .32) pounds are barnacles, so harvesters will not be paid for them. We do not have any information to suggest that there has been any change in the weight or abundance of barnacles that would require this change. Likewise, we do not have a study completed that takes into account any deviations from the last agreed upon crab schedule and how these would impact the sharing arrangement outlined in the Blackwood Report.

Conclusion

FFAW is not asking for a raise, we are only asking for harvesters to be paid their fair share. The formula in our final offer is just that—a mathematical representation of a mutually beneficial market-sharing arrangement supported by 18 years of data. In our offer, we submit that the final settlement payment should be determined by all 2024 snow crab products sold through September 30, as this is the only way to ensure that both harvesters and processors truly share the risks and

rewards of the market. If the final price per pound of snow crab sells for less than the UB 5-8 price, this will be reflected in the final price to harvesters, just as it will be if the value exceeds the market price. We further submit that this settlement price should include all sales through September 30, or four weeks after the fishing season, whichever is later, so that all snow crab landed in Newfoundland and Labrador has the chance to be processed and sold. Finally, we submit that the initial payment to harvesters be made on a sliding scale, where the initial percentage to harvesters decreases progressively over a fixed range, beginning at $3.00 to harvesters. At low market rates, processing companies already have lower monetary risk, and the very nature of the formula provides a higher market share to processing companies at this end of the market, adding an additional layer of protection to processors at low market values.

As for quality provisions, FFAW submits that the schedule should remain roughly unchanged from the last crab schedule both parties adhered to in 2022. A risk-sharing formula is in-of-itself a market-based incentive for harvesters to improve quality, as a higher quality product will be reflected in the final price. Quality deductions either require a greater amount of labor from harvesters or punish them with lower financial returns. Either way, harvesters would no longer receive the same market share for the same amount of labor, which is the very relationship on which the Blackwood Report formula relies.

Moreover, quality is a concern of the entire industry, whereas the proposed deductions imply that harvesters are the only party responsible for maintaining quality and do not offer harvesters a way to recoup value should processors be responsible for damaging product. The quality provisions suggested by ASP regarding both overfilled pans and temperature are already under the purview of the Department of Fisheries, Forestry and Agriculture which has the authority to penalize those who break the conditions of the relevant regulations. It is our stance that the province is responsible for enforcing these regulations and it is not appropriate for the crab schedule to potentially add a second penalty. Finally, it is our position that the deductions proposed by ASP are not intended to incentivize quality, but rather to reduce the price of crab and increase the processors' market share.