BC Wild Seafood Industry Profile

Prepared for:

BC Ministry of Agriculture

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Preface

This report was prepared for the British Columbia Ministry of Agriculture as a Supplementary Report to the analysis of the impacts of a marine planning initiative.

The purpose of the report is to a present baseline operating, financial and economic profile for the BC wild seafood industry. The harvesting and processing components of twenty individual segments of the wild seafood industry are analyzed.

The contractor has benefited greatly from discussions with and information provided by industry, Canada Department of Fisheries & Oceans (DFO), and the Province of British Columbia.

Notwithstanding this cooperation and assistance, the contractor has final responsibility for the analysis and conclusions of the study.

Summary

- the contractor developed simple financial statements and employment profiles of harvesting & processing for 20 different wild seafood sectors to support a marine planning exercise

Wild Harvesting Sectors				
Salmon	**Herring**	**Groundfish**	**Shellfish**	**Tuna**
• seine • gillnet • troll	• roe seine • roe gillnet • food seine	• halibut longline • sablefish longline & trap • rockfish hook & line • lingcod hook & line • hake trawl • other trawl	• crab trap • geoduck dive • prawn trap • sea cucumber dive • red sea urchin dive • green sea urchin dive • shrimp trawl	• hook & line

- the Panel on the next page summaries the harvesting & processing results for the sector aggregates – salmon, herring, groundfish, shellfish and tuna (the harvesting sectors covered exclude a few fisheries which comprise approximately 7% of total industry ex-vessel value)

- the analysis demonstrates that the wild seafood industry generates significant revenues, wages, investment returns and employment through the wide variety of harvesting and processing sector activities e.g., total processing sector revenues of $747.8 million

- the wild seafood sector also generates impacts to the overall BC economy directly from the value chain activities of fishing, processing and distribution or trade (the processing and trade margin analysis below does not include processing and trade of seafood imported into the Province)

	Direct Impacts			
	Output	Gross Domestic Product	Labour Income	FTEs**
Value Chain Segment		• • • $ millions • • •		
Fishing	457.3	351.5	200.5*	3,200
Processing Margin	290.5	194.4	99.4	1,990
Trade Margin	74.8	52.4	37.4	830
All	822.6	598.3	337.3	6,020

* *includes crew wages plus management fees for fishing operations plus payroll burden on fish purchases*

** *employment in Full Time Equivalents*

- in addition, multiplier effects through supply purchases such as fuel and gear and through the retail respending of worker incomes add approximately 40% to the above figures e.g., Total Output (Revenue) impacts of the wild seafood sector amount to $1.15 billion

- in conclusion, the wild seafood sector makes an important contribution to the economy, people, businesses, communities, and First Nations of British Columbia

Baseline Financials – Total BC Commercial Fishery 2018

	Salmon[1]	Herring[2]	Groundfish	Shellfish[3]	Tuna	All
Activity						
Catch tonnes	14,787	19,022	141,121	12,720	2,715	190,365
No. Vessels[4]	932	155	325	576	120	2,108
Total Crew Jobs[4]	2,352	555	1,205	1,811	360	6,283
Fishing $000						
Ex-Vessel Revenues	89,852	16,175	144,232	192,938	14,118	457,315
Less: Management Fee	8,986	1,618	14,424	19,293	1,412	45,733
Fuel	7,088	1,610	10,463	9,960	1,800	30,921
Crew Wages	32,383	4,783	41,273	59,868	4,324	142,631
Other Variable	4,249	1,636	10,798	13,637	612	30,932
Share of Fixed[5]	14,319	1,760	21,317	15,862	2,880	56,138
Net Return or EBITDA	22,827	4,768	45,957	74,318	3,090	150,960
Handling, Processing, Sales $000						
Sales Revenue	144,599	35,575	285,007	259,558	23,078	747,817
Less: Ex-Vessel Payment	89,852	16,175	144,232	192,938	14,118	457,315
Payroll Burden[6]	2,753	407	3,510	5,089	368	12,127
Plant/Other Labour	16,087	6,556	56,976	17,913	1,901	99,433
Other	15,703	9,062	41,735	13,436	4,073	84,009
Net Return or EBITDA	20,204	3,375	38,554	30,182	2,618	94,933
Employment FTEs[7]						
Fishing Fleet - Management	120	22	192	256	19	609
- Crew	752	86	576	1,068	108	2,590
Handling, Processing, Sales	322	132	1,140	357	38	1,989
Subtotal	1,194	240	1,908	1,681	165	5,188

1 *The category Salmon does not include Transboundary (Stikine & Taku) River Salmon or Aboriginal Commercial Salmon fisheries.*

2 *The category Herring does not include Special Use Herring or Herring Spawn-on-Kelp fisheries*

3 *The category Shellfish does not include Clam or Euphausiid fisheries*

4 *The sum of vessels & crew over the 20 fleets e.g., vessels that participate in two fisheries, for example, are counted twice*

5 *The sum of fixed cost allocations over the 20 fleets – for each fleet a portion of fixed costs are allocated to the fishery of interest to account for vessels participating in multiple fisheries*

6 *EI & WCB assessments on vessel crew wages*

7 *Management FTEs – $75,000 fee per FTE, Crew FTEs – 20 weeks fished per FTE, and Handling, Processing, Sales FTEs – $50,000 wages & benefits per FTE*

Source: Appendix B

Acronyms

BC	British Columbia
DFO	Canada Department of Fisheries and Oceans
EBITDA	Earnings Before Interest, Taxes, Depreciation & Amortization
EI	Employment Insurance
F&B	Food & Bait (Herring)
FTE	Full Time Equivalent
GDP	Gross Domestic Product
GSU	Green Sea Urchin
H&L	Hook & Line
kg	kilogram (2.2046 lbs)
LL	Longline
MW	Midwater (Trawl)
RSU	Red Sea Urchin
SEIA	Socio-Economic Impact Analysis
TAC	Total Allowable Catch
WCB	WorkSafe BC

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1.0 Introduction

Background. The contractor recently analyzed the financial and economic impacts of a potential marine planning initiative for British Columbia. A key component of the work was the development of a baseline operating and financial profile of the wild seafood sector in British Columbia for 2018.

This concise report details this 2018 baseline for each of the 20 individual fleet segments considered.

Research Program. The research program underpinning the work included both primary (interview) and secondary (literature review) research:

- interviews with 49 fishing industry individuals owning or operating 68 fishing vessels that operate in 137 separate fisheries (we also interviewed 9 fish processors/buyers)
- review of several reports or publications and special data tabulations provided by Canada Department of Fisheries & Oceans (DFO)

The interviews with the fishing industry covered all salmon, herring, groundfish, shellfish and tuna sectors of interest to the marine planning initiative. The interviews addressed the cost structure of harvesting and processing, including wages & employment.

Report Outline. The next section outlines our approach and the financial results for the five fleet aggregates – salmon, herring, groundfish, shellfish and tuna – are presented. The section also outlines the importance of the wild seafood sector to the economy of British Columbia.

Appendix A gives an operating profile – active vessels, crew sizes, weeks fished, fish prices – for each of the 20 fishing fleets. The financial results for each fleet are given in Appendix B.

2.0 Financial & Economic Profile

The wild commercial fishery of British Columbia is a renewable resource harvesting, processing and food distribution industry that produces a variety of protein products that are distributed throughout the world. The industry is diverse in terms of the species harvested, harvesting gear employed, products and domestic and export markets served.

2.1 The Value Chain for BC Seafood

It is useful to analyze the commercial industry in terms of several activities – fishing, handling, processing, selling, wholesaling and retailing – which constitute a "value chain" between the aquatic environment and the final consumer of products. Each activity increases the value of the fish from the initial price paid to fishermen to the final retail price paid by consumers (Exhibit 1).

Fishing. The fish harvesting sector targets 40 or more species using a variety of gear on vessels of different sizes and scale of operation. Seine, gillnet, troll, longline, trawl, trap, dive and other gear can be used.

Commercial fishing vessels can participate in more than one type of fishery.

This study addresses the following 20 harvesting sectors or fleets.

Wild Harvesting Sectors				
Salmon	**Herring**	**Groundfish**	**Shellfish**	**Tuna**
• seine	• roe seine	• halibut longline	• crab trap	• hook & line
• gillnet	• roe gillnet	• sablefish longline & trap	• geoduck dive	
• troll	• food seine	• rockfish hook & line	• prawn trap	
		• lingcod hook & line	• sea cucumber dive	
		• hake trawl	• red sea urchin dive	
		• other trawl	• green sea urchin dive	
			• shrimp trawl	

Fish Handling, Processing and Sales. We consider fish handling, processing and sales as one aggregate. Fish handling involves tendering or packing fish to port, offloading and trucking or transport.

Fish processors convert or package raw fish into a variety of fresh, frozen, smoked, live and other products. Roe is an important product line for some species.

Plants sell finished product, sometimes through brokers, into the distribution chain.

Fish Distribution. The distribution function has both wholesaling and retailing components.

Fish processors manufacture food products and retailers sell them to end users or consumers. In between these functions are distributors or wholesalers that move the product from plant to market. Wholesaling activities can include transportation to and placement in cold storage, secondary processing, repackaging and labeling, and marketing and transportation to retailers. The two main end use markets for fish are restaurants (food service) and retail.

Exhibit 1: Seafood Value Chain

"FISHING"	**Catching Fish**
"HANDLING"	**Handling Fish** • tender/packer to dock • offload fish at dock • transport to plant
"PROCESSING"	**Processing Fish at Plant** • fresh product • frozen product • canned product • roe product • byproducts • other
"WHOLESALING"	**Distribution to Wholesale**
"RETAILING"	**Distribution to Consumers** • restaurants • retail

Revenues	Wild Seafood Value Chain Revenues – Total Industry 2018
	• • • $ millions • • •
Fishing	457.3
Processing Margin	290.5
Trade Margin to BC*	74.8
All	822.6

* *on product sold in BC (assumed that 10% of sales occur in BC)*

It is important to express prices at each activity level on a comparable weight basis. For this study we express all prices in dollars per round (whole fish weight) kilogram.

2.2 Financial Revenues & Costs

Using data from existing reports and information plus structured interviews with industry, we developed simple Income Statements for harvesting and processing components of the seafood value chain for each of the 20 fishing fleets – see Income Statements by species group in Appendix B. Appendix A provides details on prices, ex-vessel & processed, number of vessels and crew complements by fleet.

Exhibit 2 summarizes the base financial results for fishing and processing value chain components for five fleet aggregates – salmon, herring, groundfish, shellfish & tuna – for the year 2018.

We call the results total BC commercial fishery results but the figures exclude a few fisheries such as herring spawn-on-kelp, special use herring, clam, and euphausiid. The figures also exclude the commercial aboriginal in-river fishery for salmon and commercial salmon fisheries in the transboundary Stikine and Taku Rivers. These excluded fisheries comprise about 7% of the provincial total ex-vessel value.

The Handling, Processing, Sales function refers only to wild seafood caught by BC fishermen and excludes the processing of raw seafood imported into the province.

Note the following:

- Management Fee – each fishing operation, like any business, entails a management function. This is true even for owner-operator situations. We ascribed 10% of fleet revenues as a "management fee" to account for this critical business role. The management function takes place on land and can be provided by an individual or owner who does not set foot on the fishing vessel.
- Share of Fixed Vessel Costs – many vessels operate in more than one fishery so one can not allocate the total fixed costs – Repairs and Maintenance, Insurance etc. – to any one fishery. We portioned a share of fixed costs ranging from 20% (e.g., green sea urchin) to 100% (e.g., roe herring gillnet) depending on the fishery of interest.
- Payroll Burden – the buyer of the fish from the harvester is deemed to be the employer of record and is liable for the employer's portion of Employment Insurance (EI) and WorkSafe BC assessments – we used a payroll burden rate of 8.5% on crew wages.
- Earnings Before Interest Taxes & Amortization (EBITDA) – is the gross return to capital, both tangible such as vessels and in-tangible such as licences & quota. It includes interest payments, depreciation and before tax-profit.

Exhibit 2: Baseline Financials – Total BC Commercial Fishery 2018

	Salmon[1]	Herring[2]	Groundfish	Shellfish[3]	Tuna	All
Activity						
Catch tonnes	14,787	19,022	141,121	12,720	2,715	190,365
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7 *Management FTEs – $75,000 fee per FTE, Crew FTEs – 20 weeks fished per FTE, and Handling, Processing, Sales FTEs – $50,000 wages & benefits per FTE*

Source: Appendix B

- Handling, Processing, Sales – include packing, offloading, and trucking/transport which can be significant e.g., such handling costs for North Coast-caught geoduck transported to Greater Vancouver can approach 10% of the processed sales price
- Employment – much of fishing and processing is seasonal so the number of jobs can be much greater than the number of Full Time Equivalent (FTE) positions. We converted the fleet management plus the handling/processing/sales functions into FTEs using a deemed annual wage per FTE – $75,000 fee per management FTE and $50,000 wages & benefits per FTE for handling, processing, sales. For fishing jobs, we estimated 20 weeks fishing as one FTE to account for the intensive nature of the activity (Note: handling/processing/sales wages & FTEs include the administrative or overhead component as well as the production component of employment)

The management function and associated fee could be deemed to be part of the capital return or as a professional service to the fishing business. We have chosen to treat it, for the purpose of this study, as a separate labour return to highlight its important role.

The results in Exhibit 2 should be viewed as a reasonable representation of financial circumstances of the industry in 2018. Detailed formal financial surveys of commercial fishing and processing operations were beyond the scope, timeline and budget for the assignment.

2.3 Economic Impacts

The wild seafood sector from Pacific Canada waters has an important impact on the BC economy.

Direct Impacts. Economic Impacts flow directly from value chain activities of fishing, processing and distribution or trade.

	Direct Impacts			
	Output	GDP	Labour Income	FTEs
Value Chain Segment		• • • $ millions • • •		
Fishing	457.3	351.5	200.5*	3,200
Processing Margin	290.5	194.4	99.4	1,990
Trade Margin	74.8	52.4	37.4	830
All	822.6	598.3	337.3	6,020

* *includes crew wages plus management fees for fishing operations plus payroll burden on fish purchases*

Direct Output or Revenue amounted to $823 million in 2018. Gross Domestic Product or GDP – the combined return to capital and labour – amounted to over 70% of this at $598 million. Labour Income – wages, salaries plus benefits – came to $337 million of the GDP figure. And employment amounted to 6,020 Full Time Equivalents or FTEs.

The bulk of Direct Impacts flow from the fishing or harvesting component of the value chain.

Total Impacts. Impacts on the economy extend beyond these Direct Impacts.

Fishermen, processors and the distribution sector incur expenditures on supplies such as fuel and gear which in turn generate second round so-called Indirect Impacts. And fishermen and other workers at the direct and indirect stages spend money on food, clothing, housing and a myriad of other consumer items generating so-called Induced Impacts.

	Impacts	
Economic Measure	Direct	Total*
Output $ millions	823	1,150
GDP $ millions	598	835
Labour Income $ millions	337	470
Employment FTEs	6,020	8,430

* *using a simple multiplier of 1.40 to account for indirect supplier and induced consumer respending impacts for Total Impacts*

The Total Output (Revenue) impacts of the wild seafood sector exceed $1 billion. The wild seafood industry also has a significant export component and therefore provides important foreign exchange earnings to the economy.

Bibliography

BC Ministry of Agriculture, "British Columbia Seafood Industry Year in Review", Annual.

BC Ministry of Agriculture, "British Columbia Fish Processing Employment 2016", August 2018.

GSGislason & Associates Ltd., "The Area A Commercial Crab Fishery – A Significant Stimulus to the Northern Economy", Prepared for Area A Crab Association, August 2004.

GSGislason & Associates Ltd., "Employment Impacts of ITQ Fisheries in Pacific Canada", Prepared for Canada Fisheries & Oceans, Ottawa 2008.

GSGislason & Associates Ltd., "Economic Impacts from a Reduced Groundfish Trawl Fishery in British Columbia", Prepared for BC Ministry of Environment, June 2010.

GSGislason & Associates Ltd., "The British Columbia Salmon Fleet Financial Profile 2009", Prepared for Canada Fisheries & Oceans, Vancouver 2011.

GSGislason & Associates Ltd., "Canadian Seafood Benchmarking Study", Prepared for Agriculture & Agri-Food Canada, Ottawa 2013.

GSGislason & Associates Ltd., "The BC Fishing Industry – Labour Market Information", Prepared for BC Seafood Alliance, January 2013.

GSGislason & Associates Ltd. & Castlemain Group Inc., "Leasing Practices in BC Commercial Fisheries in the Context of the PICFI Program", Prepared for Fisheries & Oceans Canada, April 2017.

GSGislason & Associates Ltd. and Institute of Social & Economic Research (ISER) University of Alaska Anchorage, "Economic Impacts of Pacific Salmon Fisheries", Prepared for Pacific Salmon Commission, July 2017.

GSGislason & Associates Ltd., "Linkages Between Seafood Harvesting and Processing", Prepared for Canada Fisheries & Oceans, August 2017.

GSGislason & Associates Ltd., "Offshore Pacific Hake in Canada: Economic Impacts", Prepared for Canadian Groundfish Research & Conservation Society, July 2018.

Nelson, Stu, "Pacific Commercial Fishing Fleet: Financial Profiles for 2009", Prepared for Canada Fisheries & Oceans, Vancouver 2011.

Appendix A

Operations Profile

Exhibit A.1: BC Commercial Fishing Fleet Activity in 2018

Fleet/Gear	Activity		
	No. Active Vessels	Crew per Vessel*	Weeks Fished per Vessel
Salmon			
Seine	91	5.0	8
Gillnet	626	2.0	6
Troll	215	3.0	6
Herring			
Roe Seine	35	5.0	3
Roe Gillnet	110	3.0	3
Food Seine	10	5.0	4
Groundfish			
Halibut Longline	147	3.8	3
Sablefish Longline/Trap	33	5.5	16
Rockfish Hook & Line	35	2.5	10
Lingcod Hook & Line	43	2.5	5
Hake Midwater Trawl	30	4.0	15
Groundfish Bottom/Other Trawl	37	4.0	25
Shellfish			
Crab Trap	214	3.0	20
Geoduck Dive	40	3.0	10
Prawn Trap	204	3.5	7
Sea Cucumber Dive	35	3.5	3
Sea Urchin Dive – Red	38	3.0	10
Sea Urchin Dive – Green	8	3.0	3
Shrimp Trawl	37	2.0	10
Tuna			
Tuna Hook & Line	120	3.0	6

* *includes the skipper*

Exhibit A.2: The BC Commercial Fishery in 2018 - Coastwide Catch

		Salmon/Herring Fleets			Groundfish Fleets						Other Fleets
		GN	SN	TR	HAL	SF	RF	LC	Hake	Trawl	
						••• tonnes •••					
Salmon	- Chinook	60	29	572							
	- Chum	2,056	1,661	24							
	- Coho	11	13	512							
	- Pink	96	451	71							
	- Sockeye	3,084	5,551	596							
Herring	- Food & Bait		5,447								
	- Roe Herring	10,465	3,110								
Groundfish	- Arrowtooth									9,458	
	- Dogfish				40	5	2			207	
	- Hake								102,241		
	- Halibut				3,113	109	86	22			
	- Lingcod				98	24	24	612		321	
	- Pacific Cod									280	
	- Pollock									3,357	
	- Rockfish				310	361	247	13		14,677	
	- Sablefish				157	1,775	30			172	
	- Skate				63	28	5			234	
	- Sole									3,050	
Shellfish	- Crab										4,657
	- Geoduck										1,383
	- Prawn										1,701
	- Sea Cucumbers										1,689
	- Sea Urchin: Red										2,677
	- Sea Urchin: Green										232
	- Shrimp										381
Tuna											2,715

Legend:

GN – gillnet	HAL – halibut longline
SN – seine	SF – sablefish longline/trap
TR – troll	RF – rockfish hook & line
	LC – lingcod hook & line
	Hake – hake midwater trawl
	Trawl – groundfish bottom trawl

Exhibit A.3: The BC Commercial Fishery in 2018 – Ex-Vessel Prices

		Salmon/Herring Fleets			**Groundfish Fleets**						**Other Fleets**
		GN	SN	TR	HAL	SF	RF	LC	Hake	Trawl	
						• • • $ per kg RD • • •					
Salmon	- Chinook	11.20	6.60	17.00							
	- Chum	3.15	3.10	3.00							
	- Coho	2.75	2.20	7.80							
	- Pink	.65	.85	2.15							
	- Sockeye	7.20	6.40	8.70							
Herring	- Food & Bait		.35								
	- Roe Herring	1.20	.55								
Groundfish	- Arrowtooth									.95	
	- Dogfish				.22	.22	.22	.22		.11	
	- Hake								.27	.26	
	- Halibut				13.25	13.25	13.25	13.25			
	- Lingcod				7.25	7.25	7.25	7.25		5.75	
	- Pacific Cod									1.75	
	- Pollock									.46	
	- Rockfish				2.00	2.00	18.00	2.00		1.15	
	- Sablefish				13.00	13.00	13.00	13.00		8.50	
	- Skate				1.50	1.50	1.50	1.50		1.20	
	- Sole									1.32	
Shellfish	- Crab										14.30
	- Geoduck										37.40
	- Prawn										29.70
	- Sea Cucumbers										7.70
	- Sea Urchin: Red										2.65
	- Sea Urchin: Green										6.40
	- Shrimp										6.60
Tuna											5.20

Legend:
GN – gillnet
SN – seine
TR – troll
HAL – halibut longline
SF – sablefish longline/trap
RF – rockfish hook & line
LC – lingcod hook & line
Hake – hake midwater trawl
Trawl – groundfish bottom trawl

Exhibit A.4: The BC Commercial Fishery in 2018 – Processed Prices*

		Salmon/Herring Fleets			Groundfish Fleets						Other Fleets
		GN	SN	TR	HAL	SF	RF	LC	Hake	Trawl	
					• • • $ per kg RD • • •						
Salmon	- Chinook	14.20	9.60	22.00							
	- Chum	6.10	6.10	6.10							
	- Coho	7.00	7.00	12.00							
	- Pink	2.00	2.00	3.50							
	- Sockeye	10.80	10.80	12.00							
Herring	- Food & Bait		.90								
	- Roe Herring	2.50	1.45								
Groundfish	- Arrowtooth									1.80	
	- Dogfish				.70	.70	.70	.70		.70	
	- Hake								1.05	1.05	
	- Halibut				17.00	17.00	17.00	17.00			
	- Lingcod				10.25	10.25	10.25	10.25		8.75	
	- Pacific Cod									3.25	
	- Pollock									1.90	
	- Rockfish				3.00	3.00	22.00	3.00		2.40	
	- Sablefish				16.20	16.20	16.20	16.20		16.00	
	- Skate				2.10	2.10	2.10	2.10		1.90	
	- Sole									2.65	
Shellfish	- Crab										18.70
	- Geoduck										46.60
	- Prawn										38.50
	- Sea Cucumbers										11.20
	- Sea Urchin: Red										6.35
	- Sea Urchin: Green										11.70
	- Shrimp										10.25
Tuna											8.50

* mainly primary processed product and not secondary processed product such as smoked portions

Legend:	GN – gillnet	HAL – halibut longline
	SN – seine	SF – sablefish longline/trap
	TR – troll	RF – rockfish hook & line
		LC – lingcod hook & line
		Hake – hake midwater trawl
		Trawl – groundfish bottom trawl

Appendix B

Baseline Financials by Fleet

Exhibit B.1: Baseline Financials – Salmon Fleets 2018

	Salmon Fleets			
	Salmon Seine	Salmon Gillnet	Salmon Troll	All
Activity				
Catch tonnes	7,705	5,307	1,775	14,787
No. Vessels[1]	91	626	215	932
Total Crew Jobs[1]	455	1,252	645	2,352
Fishing $000				
Ex-Vessel Revenues	41,279	29,446	19,127	89,852
Less: Management Fee	4,128	2,945	1,913	8,986
Fuel	1,966	3,380	1,742	7,088
Crew Wages	16,786	9,559	6,038	32,383
Other Variable	1,274	1,878	1,097	4,249
Share of Fixed[2]	5,460	5,634	3,225	14,319
Net Return or EBITDA	11,665	6,050	5,112	22,827
Handling, Processing, Sales $000				
Sales Revenue	71,354	46,970	26,275	144,599
Less: Ex-Vessel Payment	41,279	29,446	19,127	89,852
Payroll Burden[3]	1,427	813	513	2,753
Plant/Other Labour	8,475	6,103	1,509	16,087
Other	8,090	5,572	2,041	15,703
Net Return or EBITDA	12,083	5,036	3,085	20,204
Employment FTEs[4]				
Fishing Fleet - Management	55	39	26	120
- Crew	182	376	194	752
Handling, Processing, Sales	170	122	30	322
Subtotal	407	537	250	1,194

Note: The category Salmon does not include Transboundary (Stikine & Taku) River Salmon or Aboriginal Commercial Salmon fisheries.

1 *The sum of vessels & crew over the fleets e.g., vessels that participate in two fisheries, for example, are counted twice*

2 *The sum of fixed cost allocations over the fleets – for each fleet a portion of fixed costs are allocated to the fishery of interest to account for vessels participating in multiple fisheries (portions are 60% salmon seine, 60% salmon gillnet & 50% salmon troll)*

3 *EI & WCB assessments on vessel crew wages*

4 *Management FTEs – $75,000 fee per FTE, Crew FTEs – 20 weeks fished per FTE, & Handling, Processing, Sales FTEs – $50,000 wages $ benefits per FTE*

Exhibit B.2: Baseline Financials – Herring Fleets 2018

	Herring Fleets			
Activity	Roe Herring Seine	Roe Herring Gillnet	Food & Bait Seine	All
Catch tonnes	3,110	10,465	5,447	19,022
No. Vessels[1]	35	110	10	155
Total Crew Jobs[1]	175	330	50	555
Fishing $000				
Ex-Vessel Revenues	1,711	12,558	1,906	16,175
Less: Management Fee	171	1,256	191	1,618
Fuel	210	1,320	80	1,610
Crew Wages	492	3,576	715	4,783
Other Variable	121	1,469	46	1,636
Share of Fixed[2]	700	660	400	1,760
Net Return or EBITDA	17	4,277	474	4,768
Handling, Processing, Sales $000				
Sales Revenue	4,510	26,163	4,902	35,575
Less: Ex-Vessel Payment	1,711	12,558	1,906	16,175
Payroll Burden[3]	42	304	61	407
Plant/Other Labour	778	5,233	545	6,556
Other	1,400	5,756	1,906	9,062
Net Return or EBITDA	579	2,312	484	3,375
Employment FTEs[4]				
Fishing Fleet - Management	2	17	3	22
- Crew	26	50	10	86
Handling, Processing, Sales	16	105	11	132
Subtotal	44	172	24	240

Note: The category Herring does not include Special Use Herring or Herring Spawn-on-Kelp fisheries.

1 *The sum of vessels & crew over the fleets e.g., vessels that participate in two fisheries, for example, are counted twice*

2 *The sum of fixed cost allocations over the fleets – for each fleet a portion of fixed costs are allocated to the fishery of interest to account for vessels participating in multiple fisheries (portions are 20% roe herring seine, 100% roe herring gillnet & 40% food & bait seine)*

3 *EI & WCB assessments on vessel crew wages*

4 *Management FTEs – $75,000 fee per FTE, Crew FTEs – 20 weeks fished per FTE, & Handling, Processing, Sales FTEs – $50,000 wages $ benefits per FTE*

Exhibit B.3: Baseline Financials – Groundfish Fleets 2018

	Groundfish Fleets						
	Halibut Longline	Sablefish	Rockfish H&L	Lingcod H&L	Hake Trawl	Other Trawl	All
Activity							
Catch tonnes	3,781	2,302	394	647	102,241	31,756	141,121
No. Vessels[1]	147	33	35	43	30	37	325
Total Crew Jobs[1]	559	182	88	108	120	148	1,205
Fishing $000							
Ex-Vessel Revenues	44,722	25,458	6,157	4,755	27,605	35,535	144,232
Less: Management Fee	4,472	2,546	616	475	2,761	3,554	14,424
Fuel	1,103	2,112	525	323	2,700	3,700	10,463
Crew Wages	9,466	5,159	1,831	1,492	9,601	13,724	41,273
Other Variable	2,456	3,604	656	404	810	2,868	10,798
Share of Fixed[2]	4,410	2,079	560	688	8,400	5,180	21,317
Net Return or EBITDA	22,815	9,958	1,969	1,373	3,333	6,509	45,957
Handling, Processing, Sales $000							
Sales Revenue	57,559	31,999	7,640	6,686	107,353	73,770	285,007
Less: Ex-Vessel Payment	44,722	25,458	6,157	4,755	27,605	35,535	144,232
Payroll Burden[3]	805	439	156	127	816	1,167	3,510
Plant/Other Labour	1,891	1,151	296	388	35,784	17,466	56,976
Other	3,781	1,727	493	647	25,560	9,527	41,735
Net Return or EBITDA	6,360	3,224	538	769	17,588	10,075	38,554
Employment FTEs[4]							
Fishing Fleet - Management	60	34	8	6	37	47	192
- Crew	84	146	44	27	90	185	576
Handling, Processing, Sales	38	23	6	8	716	349	1,140
Subtotal	182	203	58	41	843	581	1,908

1 *The sum of vessels & crew over the fleets e.g., vessels that participate in two fisheries, for example, are counted twice*

2 *The sum of fixed cost allocations over the fleets – for each fleet a portion of fixed costs are allocated to the fishery of interest to account for vessels participating in multiple fisheries (portions are 50% halibut, 70% sablefish, 40% rockfish, 40% lingcod, 70% hake & 70% other trawl)*

3 *EI & WCB assessments on vessel crew wages*

4 *Management FTEs – $75,000 fee per FTE, Crew FTEs – 20 weeks fished per FTE, & Handling, Processing, Sales FTEs – $50,000 wages $ benefits per FTE*

Exhibit B.4: Baseline Financials – Shellfish Fleets 2018

	Shellfish Fleets							
Activity	Crab Trap	Geoduck Dive	Prawn Trap	Sea Cucumber Dive	RSU Dive	GSU Dive	Shrimp Trawl	All
Catch tonnes	4,657	1,383	1,701	1,689	2,677	232	381	12,720
No. Vessels[1]	214	40	204	35	38	8	37	576
Total Crew Jobs[1]	642	120	714	123	114	24	74	1,811
Fishing $000								
Ex-Vessel Revenues	66,595	51,724	50,520	13,005	7,094	1,485	2,515	192,938
Less: Management Fee	6,660	5,172	5,052	1,301	709	148	251	19,293
Fuel	5,136	800	2,856	105	304	19	740	9,960
Crew Wages	26,635	8,730	18,723	2,670	2,163	518	429	59,868
Other Variable	4,066	4,180	3,606	475	931	83	296	13,637
Share of Fixed[2]	6,848	1,400	5,712	840	570	48	444	15,862
Net Return or EBITDA	17,250	31,442	14,571	7,614	2,417	669	355	74,318
Handling, Processing, Sales $000								
Sales Revenue	87,086	64,448	65,489	18,917	16,999	2,714	3,905	259,558
Less: Ex-Vessel Payment	66,595	51,724	50,520	13,005	7,094	1,485	2,515	192,938
Payroll Burden[3]	2,264	742	1,591	227	184	44	37	5,089
Plant/Other Labour	3,958	2,766	3,402	1,689	5,622	209	267	17,913
Other	3,958	1,660	2,552	1,689	2,275	673	629	13,436
Net Return or EBITDA	10,311	7,556	7,424	2,307	1,824	303	457	30,182
Employment FTEs[4]								
Fishing Fleet - Management	89	69	67	17	9	2	3	256
- Crew	642	60	250	18	57	4	37	1,068
Handling, Processing, Sales	79	55	68	34	112	4	5	357
Subtotal	810	184	385	69	178	10	45	1,681

Note: The category Shellfish does not include Clam or Eurphausiid fisheries.

1 *The sum of vessels & crew over the fleets e.g., vessels that participate in two fisheries, for example, are counted twice*

2 *The sum of fixed cost allocations over the fleets – for each fleet a portion of fixed costs are allocated to the fishery of interest to account for vessels participating in multiple fisheries (portions are 80% crab, 70% geoduck, 70% prawn, 60% sea cucumber, 50% red sea urchin, 20% green sea urchin & 60% shrimp)*

3 *EI & WCB assessments on vessel crew wages*

4 *Management FTEs – $75,000 fee per FTE, Crew FTEs – 20 weeks fished per FTE, & Handling, Processing, Sales FTEs – $50,000 wages $ benefits per FTE*

Exhibit B.5: Baseline Financials – Tuna Fleet 2018

	Tuna Fleet
	Hook & Line
Activity	
Catch tonnes	2,715
No. Vessels[1]	120
Total Crew Jobs[1]	360
Fishing $000	
Ex-Vessel Revenues	14,118
Less: Management Fee	1,412
Fuel	1,800
Crew Wages	4,324
Other Variable	612
Share of Fixed[2]	2,880
Net Return or EBITDA	3,090
Handling, Processing, Sales $000	
Sales Revenue	23,078
Less: Ex-Vessel Payment	14,118
Payroll Burden[3]	368
Plant/Other Labour	1,901
Other	4,073
Net Return or EBITDA	2,618
Employment FTEs[4]	
Fishing Fleet - Management	19
- Crew	108
Handling, Processing, Sales	38
Subtotal	165

1 *The sum of vessels & crew over the fleets e.g., vessels that participate in two fisheries, for example, are counted twice*

2 *The sum of fixed cost allocations over the fleets – for each fleet a portion of fixed costs are allocated to the fishery of interest to account for vessels participating in multiple fisheries (the portion for tuna is 40%)*

3 *EI & WCB assessments on vessel crew wages*

4 *Management FTEs – $75,000 fee per FTE, Crew FTEs – 20 weeks fished per FTE, & Handling, Processing, Sales FTEs – $50,000 wages $ benefits per FTE*