Economic Impact of Lobster Sector - Province of New Brunswick and Its Counties

Pierre-Marcel Desjardins
Economist

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Introduction

This assessment seeks to quantify the economic impact of the lobster sector on the New Brunswick economy. More specifically, it analyzes the economic importance of lobster fishing and processing for the various regions of New Brunswick. It should be noted that the methodology used in the assessment is similar to that used for other species (i.e., crab, shrimp, east coast herring, Bay of Fundy herring, salmon aquaculture), thus making comparative analyses possible in the future.

Objective of the Study

The objective of the study is to evaluate this sector's total contribution both to the regional economies and to the New Brunswick economy as a whole.

Methodology

This type of analysis must be carried out with the help of a proven economic model, in this case, the input-output model. We got our baseline data from various representatives of the sector (in this case, we used data from Fisheries and Oceans Canada, the New Brunswick Department of Fisheries, and processing plant managers. We also used the document outlining the results of the *Costs and Earnings Survey* of lobster enterprises for the 2004 fishing season, published by the Policy and Economics Branch, Gulf Region, Fisheries and Oceans Canada). We used the most recent data. In most cases, the data were for 2005, although in a few cases, we used cost structures based on 2004 data.

We then used an input-output model to quantify with relative precision the total, detailed economic impact of fishing and processing. The baseline data used in this analysis were obtained during our consultations. The principle of the input-output model is that it basically tracks the money spent by the sector. For example, a processing plant may purchase packaging from a factory in Moncton or Saint John which, as a result of this, hires employees, buys raw materials, etc. Those expenditures in turn will have an effect, i.e., the employees spend their wages, pay taxes, and so on. The input-output

model takes into account the different facets of the economy and has a special characteristic in that it is based on the inputs (purchases) and outputs (production) of various large sectors of the economy. Our model has the added advantage of breaking these down geographically, by county.

Obviously, a study such as this one is based on certain general hypotheses. In other words, averages are used at various levels. By definition, averages provide a general picture and do not automatically reflect specific cases. For instance, not all plants and boats have the same cost structure. The baseline data used therefore provide an overall profile of the sector rather than a snapshot of one case in particular. What is more, the difference between the data concerning the quantities of landed lobster and those concerning the quantities of processed lobster leads us to believe that we are very likely underestimating the impact of the fishing component of the lobster sector.

IMPACT ANALYSIS – LOBSTER FISHING

The sales generated by lobster fishing in New Brunswick accounted for nearly $150 million (Table 1). The counties with the greatest impact were those with the most landings: Charlotte, Gloucester, and Kent. However, the impact is spread over a large number of counties.

Table 1: Sales generated by lobster fishing in New Brunswick, by county, total impact (direct, indirect, and induced)

County	$ million
Albert	0.60
Carleton	0.74
Charlotte	37.28
Gloucester	33.51
Kent	22.88
Kings	0.45
Madawaska	0.54
Northumberland	13.84
Queens	0.22
Restigouche	1.21
Saint John	15.97
Sunbury	0.28
Victoria	0.33
Westmorland	12.64
York	2.86
PROVINCIAL TOTAL	148.61

With regard to employment, lobster fishing was responsible for the equivalent of nearly 1,150 person-years in New Brunswick (Table 2). It should be noted that, in view of the seasonal nature of the sector, we can easily estimate a much higher number of individuals with jobs generated by lobster fishing. As in Table 1 (sales generated), the main counties are Charlotte and Gloucester, followed by Kent.

Table 2: Jobs (person-years) generated by lobster fishing in New Brunswick, by county, total impact (direct, indirect, and induced)

County	Person-years
Albert	6.4
Carleton	7.4
Charlotte	285.2
Gloucester	280.5
Kent	165.5
Kings	6.6
Madawaska	6.4
Northumberland	118.1
Queens	3.5
Restigouche	11.9
Saint John	116.0
Sunbury	3.7
Victoria	4.8
Westmorland	94.5
York	22.5
PROVINCIAL TOTAL	1,138.6

Table 3: Contribution to gross domestic project (GDP) by lobster fishing in New Brunswick, by county, total impact (direct, indirect, and induced)

County	$ million
Albert	0.31
Carleton	0.47
Charlotte	16.19
Gloucester	14.71
Kent	9.91
Kings	0.27
Madawaska	0.33
Northumberland	6.18
Queens	0.13
Restigouche	0.61
Saint John	6.89
Sunbury	0.13
Victoria	0.18
Westmorland	5.72
York	1.60
PROVINCIAL TOTAL	64.88

The contribution to the gross domestic product (production value) was almost $65 million (Table 3). The counties with the greatest impact were again Charlotte, Gloucester, and Kent.

Lastly, Table 4 shows government revenues (federal and provincial) associated with lobster fishing. It can be seen that the federal government took in $11.2 million, including $3.7 million in economic impacts from outside New Brunswick, while the New Brunswick government received revenues of nearly $6 million. Consequently, total government revenues of more than $17 million were generated by the lobster fishing sector in New Brunswick.

Table 4: Government revenues generated by lobster fishing in New Brunswick, by county, total impact (direct, indirect, and induced)

County	Federal $ million	Provincial $ million	Total $ million
Charlotte	1.83	1.43	3.26
Gloucester	1.65	1.31	2.96
Kent	1.14	0.87	2.01
Northumberland	0.66	0.52	1.18
Saint John	0.81	0.62	1.43
Westmorland	0.61	0.50	1.11
York	0.15	0.10	0.25
Other counties	0.66	0.58	1.24
PROVINCIAL TOTAL	7.51	5.93	13.44
REST OF CANADA	3.71		3.71
GRAND TOTAL	11.22		17.15

IMPACT ANALYSIS – LOBSTER PROCESSING

Turning now to the processing component of the lobster sector, we can see that the value of the sales generated totalled nearly $185 million (Table 5). However, geographically speaking, the impacts are different from those of lobster fishing. Consequently, the county with the most impact is Westmorland (nearly 40% of the total), followed by Gloucester and then Charlotte and Kent. It should be noted that the higher results for Westmorland County reflect the lobster processing activity in that county, and not only the presence of Moncton, a major commercial centre.

Table 5: Sales generated by lobster processing in New Brunswick, by county, total impact (direct, indirect, and induced)

County	$ million
Albert	0.69
Carleton	2.29
Charlotte	21.70
Gloucester	41.62
Kent	19.87
Kings	0.90
Madawaska	1.28
Northumberland	9.59
Queens	0.79
Restigouche	0.89
Saint John	5.30
Sunbury	0.70
Victoria	0.93
Westmorland	70.51
York	3.38
PROVINCIAL TOTAL	184.13

The jobs generated by lobster processing in New Brunswick represent more than 1,900 person-years (Tableau 6). We should again point out that, since this is a seasonal sector, the number of persons affected is actually much higher. The trend in the preceding table continues, with Westmorland County at the top, followed by Gloucester, Charlotte, and Kent.

Table 6: Jobs (person-years) generated by lobster processing in New Brunswick, by county, total impact (direct, indirect, and induced)

County	Person-years
Albert	6.1
Carleton	13.8
Charlotte	236.0
Gloucester	451.0
Kent	221.6
Kings	8.5
Madawaska	10.0
Northumberland	104.9
Queens	6.3
Restigouche	8.2
Saint John	35.0
Sunbury	5.8
Victoria	7.8
Westmorland	777.4
York	26.2
PROVINCIAL TOTAL	1,922.7

Table 7: Contribution to gross domestic product (GDP) by lobster processing in New Brunswick, by county, total impact (direct, indirect, and induced)

County	$ million
Albert	0.41
Carleton	1.08
Charlotte	12.64
Gloucester	24.21
Kent	11.71
Kings	0.54
Madawaska	0.72
Northumberland	5.61
Queens	0.44
Restigouche	0.55
Saint John	2.48
Sunbury	0.41
Victoria	0.49
Westmorland	41.04
York	1.99
PROVINCIAL TOTAL	105.30

The contribution to the province's gross domestic product exceeded $100 million (Table 7), with nearly 40% of the impact in Westmorland County, followed by Gloucester, Charlotte, and Kent counties.

Lastly, government revenues were about $13.8 million for the federal government (including $3.6 million in impacts from outside New Brunswick) and $7.4 million for the provincial government. Total government revenues were therefore more than $21 million (Table 8).

Table 8: Government revenues generated by lobster processing in New Brunswick, by county, total impact (direct, indirect, and induced)

County	Federal $ million	Provincial $ million	Total $ million
Charlotte	1.14	0.83	1.97
Gloucester	2.27	1.62	3.89
Kent	1.03	0.74	1.77
Northumberland	0.50	0.37	0.87
Saint John	0.26	0.21	0.47
Westmorland	3.79	2.71	6.50
York	0.20	0.15	0.35
Other counties	1.01	0.78	1.79
PROVINCIAL TOTAL	10.20	7.41	17.61
REST OF CANADA	3.61		3.61
GRAND TOTAL	13.81		21.22

OVERALL IMPACT ANALYSIS – LOBSTER SECTOR

If we combine the impact of lobster fishing with the impact of lobster processing, we get some large numbers. The sales generated in New Brunswick by the sector as a whole total more than $330 million (Table 9). The counties with the greatest impacts are Westmorland, Gloucester, Charlotte, and Kent.

Table 9: Sales generated by the New Brunswick lobster sector as a whole, by county, total impact (direct, indirect, and induced)

County	$ million
Albert	1.29
Carleton	3.03
Charlotte	58.98
Gloucester	75.13
Kent	42.75
Kings	1.35
Madawaska	1.82
Northumberland	23.43
Queens	1.01
Restigouche	2.10
Saint John	21.27
Sunbury	0.98
Victoria	1.26
Westmorland	83.15
York	6.24
PROVINCIAL TOTAL	332.74

With regard to employment, the equivalent of more than 3,000 person-years is generated by the sector as a whole (Table 10). The county at the top of the list is Westmorland, followed by Gloucester, Charlotte, and Kent.

Tableau 10: Jobs (person-years) generated by the New Brunswick lobster sector as a whole, by county, total impact (direct, indirect, and induced)

County	Person-years
Albert	12.5
Carleton	21.1
Charlotte	521.2
Gloucester	731.5
Kent	387.1
Kings	15.1
Madawaska	16.4
Northumberland	223.0
Queens	9.8
Restigouche	20.1
Saint John	150.9
Sunbury	9.5
Victoria	12.6
Westmorland	872.0
York	48.6
PROVINCIAL TOTAL	3,061.4

Table 11: Contribution to gross domestic product (GDP) by the New Brunswick lobster sector as a whole, by county, total impact (direct, indirect, and induced)

County	$ million
Albert	0.72
Carleton	1.55
Charlotte	28.83
Gloucester	38.92
Kent	21.62
Kings	0.81
Madawaska	1.05
Northumberland	11.79
Queens	0.57
Restigouche	1.16
Saint John	9.37
Sunbury	0.54
Victoria	0.67
Westmorland	46.76
York	3.59
PROVINCIAL TOTAL	170.18

The contribution of the lobster sector to New Brunswick's gross domestic product was $170 million (Table 11). The main impacts are in Westmorland, Gloucester, Charlotte, and Kent counties.

Lastly, total revenues for the federal government were more than $25 million (including about $7.3 million in impacts from outside the province) and $13.3 million for the New Brunswick government (Table 12).

Table 12: Government revenues generated by the New Brunswick lobster sector as a whole, by county, total impact (direct, indirect, and induced)

County	Federal $ million	Provincial $ million	Total $ million
Charlotte	2.97	2.26	5.23
Gloucester	3.92	2.93	6.85
Kent	2.17	1.61	3.78
Northumberland	1.16	0.89	2.05
Saint John	1.07	0.83	1.90
Westmorland	4.40	3.21	7.61
York	0.35	0.25	0.60
Other counties	1.67	1.36	3.03
PROVINCIAL TOTAL	17.71	13.34	31.05
REST OF CANADA	7.32		7.32
GRAND TOTAL	25.03		38.37

SUMMARY OF RESULTS

Table 13 presents a summary of the results.

Table 13: Summary of results, total impact (direct, indirect, and induced)

	Fishing	Processing	Total
Sales generated ($ million)	148.6	184.1	332.7
Jobs (person-years)	1138.6	1922.7	3061.4
Gross domestic product ($ million)	64.9	105.3	170.2
Revenues – federal government ($ million)	11.2	13.8	25.0
Revenues – provincial government ($ million)	5.9	7.4	13.3