

*Economic Impact Analysis of
New Brunswick's Fisheries:
Herring in Southwest New Brunswick*

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Introduction¹

The objective of the present study is to quantify the economic impact of Southwest New Brunswick's herring sector on the province's economy as a whole as well as for the individual counties of the province.

The analysis focuses on harvesting as well as on processing. We use data for the year 2002, the last year for which complete data was available. We also include a separate section on the economic impact on the province's economy of the construction of a new seiner.

Methodology

An analysis like this one can only be done using a proven economic model, in this case an input-output model. Information for our analysis came directly from industry as well as from recent studies.

The principle behind the input-output model is essentially to "follow the money path." For example, widgets used by a plant will be purchased from another plant which in turn may offer its employees more work which in turn will increase their expenditures, pay more taxes, etc. The input-output model incorporates all these components.

Finally, we need to remind the reader that such an analysis aims to present a relatively accurate picture of the situation but one should always be reminded that the results should be interpreted with caution: they probably do not offer an "exact" measure of the impacts, but rather an "acceptable approximation".

Economic Impact of Southwest New Brunswick's Herring Sector

Sales Generated

In Table 1, we find the sales generated – directly or indirectly – as a result of the activities of Southwest New Brunswick's herring sector for the province as well as for every county of the province. Harvesting generates nearly 18 million dollars in sales, 70% of which in Charlotte County. Processing generates 66,5 million dollars of

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sales, concentrated in the counties of Charlotte and Saint John. Total sales generated by the sector are estimated at over 84 million dollars.

| Table 1: Sales Generated – Direct, Indirect and Induced Impacts, Harvesting, Processing and Total, (\$ Millions) | | | |
|--|------------|------------|---------|
| | Harvesting | Processing | Total |
| Albert | \$0,09 | \$0,34 | \$0,43 |
| Carleton | \$0,26 | \$1,03 | \$1,29 |
| Charlotte | \$12,60 | \$30,96 | \$43,56 |
| Gloucester | \$0,00 | \$0,22 | \$0,22 |
| Kent | \$0,39 | \$0,53 | \$0,92 |
| Kings | \$0,19 | \$0,84 | \$1,03 |
| Madawaska | \$0,17 | \$0,68 | \$0,85 |
| Northumberland | \$0,17 | \$0,85 | \$1,02 |
| Queens | \$0,09 | \$0,53 | \$0,62 |
| Restigouche | \$0,15 | \$0,61 | \$0,75 |
| Saint John | \$1,74 | \$22,28 | \$24,02 |
| Sunbury | \$0,13 | \$0,46 | \$0,59 |
| Victoria | \$0,13 | \$0,47 | \$0,60 |
| Westmorland | \$0,94 | \$2,78 | \$3,72 |
| York | \$0,79 | \$3,94 | \$4,73 |
| Total | \$17,83 | \$66,51 | \$84,34 |

Employment Generated

The impact on employment is impressive (Table 2). The sector was responsible for the employment of the equivalent of nearly 1250 person-years. Person-years refer to the amount of work, not the number of individuals involved.

Note that the total impact for Charlotte County is over 1000 person-years. When one considers that the 2001 Statistics Canada Census identified 11 375 employed individuals in Charlotte County, one realises the tremendous importance of the herring sector on the county's economy.

| | Harvesting | Processing | Total |
|----------------|------------|------------|--------|
| Albert | 0,4 | 2,3 | 2,7 |
| Carleton | 1,1 | 7,5 | 8,7 |
| Charlotte | 181,7 | 826,8 | 1008,5 |
| Gloucester | 0,0 | 1,5 | 1,5 |
| Kent | 2,8 | 3,4 | 6,3 |
| Kings | 0,8 | 5,9 | 6,7 |
| Madawaska | 0,7 | 4,5 | 5,2 |
| Northumberland | 0,8 | 5,8 | 6,6 |
| Queens | 0,4 | 4,3 | 4,7 |
| Restigouche | 0,6 | 3,7 | 4,3 |
| Saint John | 7,9 | 127,9 | 135,8 |
| Sunbury | 0,5 | 2,4 | 2,9 |
| Victoria | 0,5 | 3,3 | 3,9 |
| Westmorland | 5,6 | 17,7 | 23,3 |
| York | 3,9 | 18,9 | 22,8 |
| Total | 207,8 | 1036,2 | 1243,9 |

Gross Domestic Product

Southwest New Brunswick's herring sector's contribution to the province's gross domestic product was of over 32 million dollars (Table 3).

| | Harvesting | Processing | Total |
|----------------|------------|------------|---------|
| Albert | \$0,02 | \$0,12 | \$0,15 |
| Carleton | \$0,09 | \$0,03 | \$0,53 |
| Charlotte | \$6,28 | \$12,04 | \$18,32 |
| Gloucester | \$0,00 | \$0,09 | \$0,09 |
| Kent | \$0,16 | \$0,20 | \$0,36 |
| Kings | \$0,05 | \$0,33 | \$0,39 |
| Madawaska | \$0,05 | \$0,27 | \$0,32 |
| Northumberland | \$0,05 | \$0,34 | \$0,40 |
| Queens | \$0,02 | \$0,22 | \$0,25 |
| Restigouche | \$0,04 | \$0,23 | \$0,27 |
| Saint John | \$0,54 | \$6,40 | \$6,94 |
| Sunbury | \$0,04 | \$0,17 | \$0,20 |
| Victoria | \$0,04 | \$0,18 | \$0,22 |
| Westmorland | \$0,35 | \$1,12 | \$1,48 |
| York | \$0,30 | \$2,04 | \$2,33 |
| Total | \$8,03 | \$24,21 | \$32,24 |

Government Revenues

From Table 4 we see that the sector was responsible for over 5 million dollars in government revenues, nearly 3 million for the federal government and 2,3 million dollars for the provincial government.

| | Harvesting | Processing | Total |
|------------|------------|------------|--------|
| Federal | \$0,98 | \$1,98 | \$2,96 |
| Provincial | \$0,77 | \$1,53 | \$2,30 |

Economic Impact of the Construction of a Seiner in Bas-Caraquet

In this final section, we present the economic impact of the construction of a new seiner – to harvest herring in Southwest New Brunswick – built in Bas-Caraquet. In Tables 5 to 8 we see that the impact is indeed significant. It would generate – directly and indirectly – sales of over 13 million dollars in the province, principally in Gloucester County. Employment creation would be the equivalent of 55,6 person-years. The province’s gross domestic product would receive a boost of over 3 million dollars. The federal government would see its revenues increase by approximately 160,000\$ while the increase for the provincial government would be of approximately 140,000\$.

Note that we assume that construction – and thus the economic impact – would occur in 2004. Under such a scenario, there may still be ripple effects in the following years, but these would be small.

| Table 5: Sales Generated – Direct, Indirect and Induced Impacts, Construction of a Seiner, (\$ Millions) | |
|--|---------|
| | Total |
| Albert | \$0,03 |
| Carleton | \$0,11 |
| Charlotte | \$0,07 |
| Gloucester | \$11,31 |
| Kent | \$0,11 |
| Kings | \$0,06 |
| Madawaska | \$0,08 |
| Northumberland | \$0,14 |
| Queens | \$0,03 |
| Saint John | \$0,09 |
| Restigouche | \$0,31 |
| Sunbury | \$0,03 |
| Victoria | \$0,05 |
| Westmorland | \$0,39 |
| York | \$0,28 |
| Total | \$13,09 |

| Table 6: Employment Generated – Direct, Indirect and Induced Impacts, Construction of a Seiner, (Person-Years) | |
|--|-------|
| | Total |
| Albert | 0,2 |
| Carleton | 0,6 |
| Charlotte | 0,4 |
| Gloucester | 45,6 |
| Kent | 0,5 |
| Kings | 0,3 |
| Madawaska | 0,4 |
| Northumberland | 0,8 |
| Queens | 0,1 |
| Saint John | 0,5 |
| Restigouche | 1,7 |
| Sunbury | 0,2 |
| Victoria | 0,3 |
| Westmorland | 2,5 |
| York | 1,5 |
| Total | 55,6 |

| Table 7: Gross Domestic Product – Direct, Indirect and Induced Impacts, Construction of a Seiner, (\$ Millions) | |
|---|--------|
| | Total |
| Albert | \$0,01 |
| Carleton | \$0,04 |
| Charlotte | \$0,03 |
| Gloucester | \$2,53 |
| Kent | \$0,04 |
| Kings | \$0,02 |
| Madawaska | \$0,03 |
| Northumberland | \$0,06 |
| Queens | \$0,01 |
| Saint John | \$0,03 |
| Restigouche | \$0,13 |
| Sunbury | \$0,01 |
| Victoria | \$0,02 |
| Westmorland | \$0,17 |
| York | \$0,13 |
| Total | \$3,26 |

| Table 8: Government Revenues – Direct, Indirect and Induced Impacts, Construction of a Seiner, (\$million) | |
|--|--------|
| | Total |
| Federal | \$0,16 |
| Provincial | \$0,14 |