
Kluane National Park and Reserve Economic Impact Study

Background Paper No. 2

ECONOMIC IMPACT ANALYSIS

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Kluane National Park and Reserve Economic Impact Study:

Background Paper #2 Economic Impact Analysis

1 Introduction

This background paper is the second of six prepared for the Kluane Economic Impact Study. In addition, a summary report was prepared outlining the findings of the six background papers. The six papers are:

- 1 Baseline Economic Profile
- 2 Economic Impact Analysis (this one)
- 3 Economic History of the Kluane Region
- 4 Community Economic Comparison Analysis
- 5 Economic Benefits Framework
- 6 Community Interviews

All papers are available in PDF format at <http://www.yukonomics.ca/reports/kluane/>

We used a standard, rigorous economic impact assessment model — developed specifically to measure the impact of parks — to measure the current annual economic impact of the Park on Haines Junction, the Kluane region, and the Yukon. We follow the standard approach and measure the economic impact associated with the spending by the park on capital, operations and maintenance, along with the spending in the area by park visitors.

An economic impact assessment is a standard economic tool designed to measure the total effect of an injection of funds into a local or regional economy. The assessment is a snapshot, measuring the impact of that injection for a single year. It cannot measure costs and benefits over time nor can it provide measures to judge whether an equivalent expenditure of government funds on something else would have generated more or less benefit.

Economic impacts are usually classified as direct, indirect, or induced. The scale of indirect and induced impacts is heavily dependent on the size and diversity of the local economy. If more goods and services are available locally, there tends to be less leakage out of the local economy and indirect and induced impacts will be greater. In very small economies, total economic impacts are often considerably smaller than the original expenditures because much of the original expenditure flows out of the community immediately. Communities such as Haines Junction — because of their size and proximity to Whitehorse — have significant leakage for two reasons. First they are too small to support many of the basic goods

Direct impacts:

The value-added increase in employment, local incomes and local GDP retained in the area, and tax receipts to all governments from Park and visitor spending.

Indirect impacts:

The value-added increase in employment, local incomes and local GDP retained in the area, and tax receipts to all governments from local suppliers of goods and services to the Park.

Induced impacts:

The increase in employment, local incomes, local GDP, and tax receipts from the spending and re-spending of all labour income generated by the original expenditure.

and service requirements of their residents. Second, even when the goods and services are available locally, they cannot compete with the multiple benefits of a “trip to town”.

The calculation of all impacts requires the use of multipliers. The multipliers used to calculate direct and indirect impacts for this project come from Statistics Canada’s 1999 Inter-provincial Open Input-Output model. Induced impacts were not calculated, as Statistics Canada no longer includes these values.

Economic impact analysis is not a precise economic analysis tool. However, it is a very useful analytical technique to help describe the importance of different economic activities and to illustrate the relationships between various sectors of the economy. In the case of parks and protected areas, traditional economic impact analysis examines the impact of spending from two sources — the park or protected area itself and attributable spending by visitors to the park.

There are two major sources that provide the injection of funds associated with Kluane NPR into the Kluane region and the Yukon as a whole. These are spending by Parks Canada through its payroll along with purchases of goods and services from local suppliers, and the spending of visitors to the Kluane region that can be attributed to the presence of the Park.

In this economic impact analysis of Kluane NPR, spending by Parks Canada is examined first. This is followed by an examination of the spending by visitors associated with Kluane National Park and Reserve. The third section of this background paper describes the economic impacts derived from these spending sources. A fourth section is devoted to reviewing economic impact studies that have been done on other national parks.

2 Parks Canada expenditures

Table 1 is a summary of Kluane National Park and Reserve's employment and expenditures over the past five fiscal years. The other expenditures category includes both capital spending and the purchase of goods and services. Most of the wages and salaries shown in Table 1 are paid in the Kluane region, with positions associated with KNPR that are based in Whitehorse making up the remainder. The other expenditures category includes all other spending associated with the park and is not confined to the Kluane region or to the Yukon.

**Table 1 Summary of KNPR's employment and expenditures,
by fiscal year, 1999/2000 to 2003/04**

<i>Fiscal year</i>	<i>Employment (person-years)</i>	<i>Wages & salaries</i>	<i>Other expenditures</i>	<i>Total expenditures</i>
2003/04	28.4	\$1,431,826	\$973,253	\$2,405,079
2002/03	28.6	\$1,286,022	\$739,483	\$2,025,505
2001/02	n/a	\$1,289,358	\$1,055,898	\$2,345,256
2000/01	n/a	\$1,087,528	\$823,408	\$1,910,936
1999/2000	n/a	\$1,051,041	\$819,416	\$1,870,457
5-year average	(28.5)	\$1,229,000	\$882,000	\$2,111,000

Source: Kluane National Park and Reserve data

Note: Person-years of employment were not readily available prior to 2001/02 but Parks' staff suggest there was little change over the five year period.

There is a clear pattern of increased spending on wages and salaries over the five-year period even though the total person-years of employment have remained relatively stable. Other expenditures tend to be much more variable, however, as different years see different capital projects undertaken, for example.

2.1 Invoice analysis

We undertook a detailed inventory of the expenditures of KNPR on site at the park headquarters. The inventory involved a complete description of each expense paid by the park over the 2002-03 fiscal year. The purpose of the inventory was to document precisely what the park spent its funds on, how much was spent on each item and where those funds were spent. By gathering this information a better understanding of the spending pattern of the park was documented and a better understanding of the economic impact associated with this spending could be made.

Specifically, two spreadsheets were created: one for operations and maintenance spending and one for infrastructure or capital costs. Within each spreadsheet, six different geographic areas were used in which to categorize each expense:

- Haines Junction
- Kluane Region
- Yukon Territory
- Rest of Canada
- USA, and
- Rest of World.

In addition, expenses were categorized into expenditures used by the economic impact model for parks and protected areas. This included a total of 17 expenditure types: 7 for O & M costs; 9 for capital costs; and 1 for wages and salaries.

In preparing the spreadsheets and categorizing the expenditures by expenditure type, we found that not all expenditure categories in the model were used. Frequently it was difficult to determine into which category an expenditure should fit, without tracing back to the original purchaser. Nevertheless, every invoice paid by the park was examined and categorized with both an expenditure category and a geographic zone.

Table 2 below presents a summary of the invoice analysis by commodity group and geographic area.

Table 2 Kluane National Park and Reserve invoice analysis

<i>Expenditure categories</i>	<i>Geographic area of expenditure</i>					
	<i>Haines Junction</i>	<i>Kluane region</i>	<i>Yukon</i>	<i>Rest of Canada</i>	<i>USA</i>	<i>Total</i>
O & M						
Utilities	\$129,216.70		\$19,059.87	\$1,632.74		
Printing/publications			\$1,074.87	\$234.83		
Professional services	\$592.40	\$6,412.00	\$20,356.87	\$76,687.43		
Other business services	\$58,774.68		\$2,120.26	\$3,549.00		
Travel		\$803.89	\$86,831.15	\$23,712.43	\$2,300.64	
Other expenditures	\$23,075.80	\$1,012.29	\$95,981.67	\$35,777.20	\$14,256.47	
Total	\$211,659.58	\$8,228.18	\$225,424.69	\$141,593.63	\$16,557.11	\$603,463.19
Capital						
Repairs and renovations	\$1,152.32		\$35,100.79	\$28.68		
Other engineering construction			\$19,854.54			
Other	\$3,778.38		\$74,963.76	\$1,141.07		
Total	\$4,930.70	\$0.00	\$129,919.09	\$1,169.75	\$0.00	\$136,019.54
GRAND TOTAL	\$216,590.28	\$8,228.18	\$355,343.78	\$142,763.38	\$16,557.11	\$739,482.73

Source: KNPR data.

Table 3 summarizes Table 2 and indicates that KNPR spends the majority of its budget within the Yukon Territory. In the table, the dollar figures under each area of expenditure are separate from each other area (i.e. they are non-cumulative).

Table 3 KNPR spending by geographic area of spending, 2002/2003

<i>Area of spending</i>	<i>\$ spent</i>	<i>% of spending</i>
Haines Junction	\$216,590	29.3%
Kluane region	\$8,228	1.1%
Rest of Yukon	\$355,344	48.1%
Rest of Canada	\$142,763	19.3%
USA	\$16,557	2.2%
Rest of world	\$0	0%
Total	\$739,483	100%

Source: KNPR data.

Note: Does not include wages and salaries.

No spending was recorded in the rest of the world. Summing the percentages spent within the three areas within the territory indicates a total of 78.5% (\$580,162) of the total spending occurring within the Yukon.

In the past, the total expenditures of Kluane National Park and Reserve in each of the expenditure categories would have been used to calculate economic impacts within the Yukon. It would have been assumed that all expenditures were made within the territory and that the vast majority of impacts would have been felt in the Yukon. Table 3 above clearly indicates that this is not the case: only 78.5% of all spending can be used to calculate impacts within the territory, and 2.2% of spending – that occurring in the USA - will have no impact in Canada, let alone the Yukon.

The detailed expenditures presented in Table 2, combined with the wages and salaries paid (Table 1) were used to estimate the economic impact associated with Kluane National Park spending. The economic impacts of total spending by KNPR are presented in Section 4 of this paper.

3 Visitor expenditures

The estimation and calculation of visitor expenditures that are attributable to Kluane National Park and Reserve is difficult. There are several reasons for this, not least of which is the lack of an accurate count of visitors. In addition, KNPR visitor expenditure surveys have not been conducted in years, making it necessary to use and adapt other sources of data on visitor spending to generate current estimates. In this study, data from the 1999 Yukon Visitor Exit Survey is used, along with other relevant sources.

The starting point is the estimation of the number of park visitors. This is followed by the derivation of estimates of visitor spending.

3.1 Visitor numbers

Visitor numbers at almost all national parks are difficult to determine accurately. There are several reasons for this difficulty:

- Most national parks can be accessed from many different locations; few have a single gate or access point. Complicating this further is the fact many parks can be accessed by road, on foot, by water and by air. The seemingly simple task of counting visitors is not easy in such open access systems.
- The terms ‘visitors’ and ‘visits’ mask many features of trips to a national park. For example a visitor can be a person or a group and a visit can be an hour’s stop or a several week expedition. To classify each of these visits as the same masks a number of features. To get around this, the terms person-visits and/or person-visit-days have been applied to attempt to reflect more accurately what constitutes a visit or a visitor. The measure person-visit is the most commonly used measure of a visitor – it signifies one person entering a park for at least part of a day (no minimum or maximum period) for park-related activities. Clearly, park staff, contractors and commercial visitors (couriers, suppliers, etc.) are excluded from visitor counts. The term person-visit is usually translated into the more common term “visitor”. The point is, however, that questions of definition have a large impact on the numbers generated.
- The number of visitors to a park relates to the dynamics of the park and area in which the park is situated. Virtually all parks on or close to a major thoroughfare experience large visitor numbers (e.g. approximately four million people visit Banff National Park which is on the Trans Canada Highway, while another four million just pass through). The converse is also true – Ellesmere Island National Park has fewer than 100 visitors per year. The level of activity in the park is related to natural and man-made features of the area. Although this fact helps explain possible levels of visits, it does not help determine the number of visitors actually experienced.

For these reasons it is difficult to establish irrefutable visitor numbers to any park, and especially Kluane National Park and Reserve, given its easy access from the Alaska and Haines Highways.

Several characteristics of tourism in Yukon help situate Kluane’s position. In the Visitor Exit Surveys the most often mentioned activity by tourists to the territory is ‘visiting natural attractions.’ In addition, the vast majority of visitors travel by car, truck or van. Of the nine tourism regions, only two are visited by more than half of Yukon visitors – Whitehorse and Kluane. Of the visitors to Kluane region, over 70% stopped in the area. Only in the Whitehorse and Klondike tourism regions do visitors stay longer than in the Kluane region. Total

Tourism in the Kluane Region

From the Visitor Exit Survey, we know that most Kluane visitors:

- come by vehicle,
- rate natural attractions as the biggest draw,
- stay longer than in most other regions, and,
- spend substantially more in the region than in most other Yukon regions.

visitor spending is also larger in these two regions. However, visitors stay longer in Kluane than the other seven tourism regions and total visitor spending in Kluane region is substantially higher than in those other regions. Total visitor spending in Kluane region in 1999 was estimated at \$6.4 million.

In this study we have relied upon two main sources for the estimation of visitor numbers. Both sources are key to reasonable estimates. The 1999 Yukon Visitor Exit Survey was one main source. The results from this survey for the Kluane tourism region provided the base number for the level of tourism (visitor numbers) in the area of the park. This number of visitors is used as the base since it is the most current and authoritative. To this base number various calculations are made that have been derived from a report¹ prepared for Parks Canada (at that time an agency of the Department of Canadian Heritage) concerning visits and economic impacts of Canada's northern national parks. This report was based on park visitor counts at each national park studied, which included Kluane NPR. This document provides information on multiple same-day park visits as well as visitor origin. The proportion of area visitors from that study who visited Kluane was applied in the current study of Kluane since it was the most appropriate and directly applicable source. For the reasons listed above, these visitor numbers are our best estimates and have been calculated below. The number of visitors estimated in this study is within 10% of the visitor numbers of a decade earlier.

The Kluane tourism region has experienced varying numbers of visitors from year to year. In 1994 there were 136,496 visitors to the region, while in 1999; there were 128,725 visitors, a decline of 6%. However, both these values are considerably larger than the number of visitors in 1987 which was 85,600 visitors.

Unfortunately, there are no accurate counts of visitor numbers to Kluane NPR for current years. However, as noted above the 1995 report² was used to provide some guidance on visitor numbers for this study. The 1995 study indicated that in 1992 there were 85,600 visitors to the Kluane region who made a stop in the region. In addition, park counts in 1992 indicated a total of 84,700 park visits at all public access sites. Park staff indicated that approximately 15% of these visits represent visits to more than one site, so that the actual number of visitors was 15% less – 71,995 visitors. This study also indicated that 3% of visitors were persons from the territory. The number of non-resident visitors was estimated to be 69,835. This visitor number was broken down by those who were day visitors and those who stayed overnight. The number of overnight visitors was calculated from campground use figures. It was found that 96.5% of visitors were on day visits while the remaining 3.5% were on overnight visits.

Since the results reported in the 1995 study were based on visitor counts and in the absence of better information, we will use the ratios generated by the 1995 report to estimate Kluane NPR's visitor numbers, in conjunction with the more current Yukon and Kluane region tourism data.

The 1999 Yukon Visitor Exit Survey found that 128,795 visitors came to the Kluane region. Of these, 92,516 visitors stopped in the region; the remaining 36,279 did not stop. While some of the non-stopping visitors to Kluane region will have enjoyed the national park by virtue of its boundary location along the Alaska Highway, these people are not included as park visitors. If adjustments are made to the 92,516 visitors who stopped in the region, as indicated in the 1995 study, then the estimated numbers of visitors are as shown in Table 4 below.

¹ P.G. Whiting and Associates and Strategic Research and Analysis, Visit Profile and Economic Impact Statement: Northern National Parks (Reserves) and Historic Sites, Department of Canadian Heritage, May 1995.

² *Ibid.*

Table 4 Summary of estimated visitor numbers, KNPR

	Number of visitors
Visitors who stop	92,516
Actual visitors (number stopping reduced by 15% for multiple entries)	77,812
Yukon visitors (estimate based on 1995 study ratios)	2,334
Total non-resident visitors	75,478

Source: Based on 1999 Visitor Exit Survey and Whiting et. al., 1995

3.1.1 Front-country and back-country visitors

There are many different ways in which to classify park visitors. One of the ways in which KNPR gathers visitor numbers is through counts of people visiting the visitor reception centres at Haines Junction and Sheep Mountain, as well as those using the Kathleen Lake Campground and registrants for interior park use. Table 5 below provides a summary of these statistics for the period 1999 – 2002.

Table 5 Summary of KNPR visitor counts, 1999 to 2002

	1999	2000	2001	2002	Average
Front-country	59,416	55,578	53,885	53,063	55,486
Back-country	3,152	2,977	2,864	2,869	2,966
Total	62,568	58,555	56,749	55,932	58,452

Source: KNPR visitor count data

Note: Day hikers are included in the back-country visitor counts.

There are many practical issues related to the numbers presented in Table 5. First, there is likely to be double or triple counting of the same visitors. For example, a person coming into the Haines Junction VRC to register for an interior trip may be counted among visitors to the VRC as well as a back-country user. Similarly, if the same visitor also visited the Sheep Mountain VRC, that visitor would be counted for the third time. Over counting may therefore be a problem. However, reliance on counting the number of visitors to information/reception centres may also seriously under count park visitors. Repeat visitors, for example, frequently do not use the VRC and many other visitors do not take the time to visit the VRC. Finally, the actual mechanics of counting, e.g., signing visitor books, may lead to undercounts.

There is another reason for gathering this data, however, especially for back-country visitors. Interior visitors, when they register, must provide an estimate of the number of days they expect to remain in the park. For the years indicated in Table 5, the average number of days varied between 3.4 and 3.6 days. This means, for instance, that in 1999, the 3,152 registrants spent 10,675 person-days in the interior. Front-country visitors typically spend a day or less in the park. Even campers at the Kathleen Lake campground usually spend only one night in the campground — e.g. in 2001 there were 3,207 campers and a total of 3,857 visitor nights recorded.

The relevance of these distinctions between types of visitors can be important for economic impact analysis. Clearly, the back-country users are spending much more time in the park than front-country users, but their numbers are quite small relative to the front-country majority. It has been argued that the average back-country visitor spends more on their visit to the park than the average front-country visitor. Conversely, it has also been argued that these back-country users come well prepared and actually spend little money in the region of the park. Where on the spectrum the average back-country visitor to Kluane NPR falls has yet to be established, and for the purposes of this study of economic impacts, the distinction between front- and back-country has not been developed further.

3.1.2 Origin of visitors

Table 6 below estimates the numbers of KNPR visitors broken out by major place of origin. The estimates are based on the percentage of Kluane region visitors from each area as shown in the 1999 Visitor Exit Survey applied to the total estimate of 75,478 non-Yukon visitors arrived at in Table 4 above.

Table 6 Estimated number of KNPR visitor by place of origin

	Canada	USA	Overseas
Percentage (from VES)	10%	74%	16%
Number (applying % to 75,478 non-Yukon visitors)	7,548	55,854	12,076

Source: 1999 Yukon VES and Table 4

3.2 Visitor spending

Information on visitor spending within the Kluane region is available from the 1999 Yukon Visitor Exit Survey. The survey indicated that spending per visit to the region was down in 1999 compared to 1994. However, the average per party and total spending in the region per trip by major origin is as shown in Table 7 below.

Table 7 Visitor spending in the Kluane region by origin of visitor

Origin of visitor	Average spending per-party per-trip in Kluane region	Total spending in Kluane region
Canada	\$144	\$720,611
USA	\$72	\$3,075,639
Overseas	\$222	\$2,567,307

Source: 1999 Yukon Visitor Exit Survey

In order to match our visitor numbers data with the expenditure data, we need to know how much each visitor spent on average per day while in the Kluane region. In addition, to use the full capability of the economic impact model, we need as detailed a breakdown of those expenditures as possible.

The 1999 Visitor Exit Survey gives an overall average spending figure of \$40.00 per-person per-night in the Kluane region. However, given the very large differences in spending depending on place of major origin as shown in Table 7 above, we need to estimate the average per-person, per-night spending by place of major origin. Two factors were used to derive the estimates of spending per person per night by place of major origin: the average number of persons per party (2.2 persons)³ and the average length of stay in the Kluane region (1.12 nights).⁴ Applying these factors to the expenditure data above produces our estimates of visitor spending by origin shown in Table 8 below.

**Table 8 Estimated spending per-visitor, per-night
by major origin, Kluane region**

Origin of visitor	Average spending per-person, per-night
Canada	\$58.44
USA	\$29.22
Overseas	\$90.10

Source: Derived from 1999 VES data and Whiting et al, 1995

³ From the 1999 Visitor Exit Survey

⁴ From Whiting et al., 1995 (the VES does not provide clear data on the average length of stay).

When the average spending per-person, per-night values shown in Table 8 are applied to the number of visitors from each place of major origin, an overall average of \$42.00 per-person, per-night is obtained. This matches very closely the Visitor Exit Survey's figure of \$40.00 and therefore suggests that these estimates are reasonably accurate.

The daily expenditures per person in the Kluane region can be broken down into several expenditure categories by applying other results from the 1999 Yukon Visitor Exit Survey. Based on the percentage of spending in various categories, the estimated detailed visitor spending by major origin is that shown in Table 9 below.

**Table 9 Kluane region visitor spending per-person, per-day
by category and origin of visitor**

<i>Spending category</i>	<i>Visitor origin</i>		
	<i>Canada</i>	<i>USA</i>	<i>Overseas</i>
Transportation	\$23.96	\$11.69	\$28.83
Accommodation	\$12.27	\$8.77	\$27.03
Groceries/alcohol	\$4.09	\$2.05	\$18.02
Restaurants	\$10.52	\$4.38	\$4.51
Recreation/entertainment	\$4.09	\$0.58	\$9.91
Other spending	\$3.51	\$1.75	\$1.80
Total	\$58.44	\$29.22	\$90.10

Source: Derived from 1999 Yukon Visitor Exit Survey data.

3.2.1 Total visitor spending

Combining the results presented in Table 9 with the estimated number of visitors to Kluane NPR shown in Table 6 creates an estimate of the total spending by non-resident visitors to the park. The estimate of total spending is shown in Table 10 below.

Table 10 Total Kluane region visitor spending by category and visitor origin

<i>Spending category</i>	<i>Visitor origin</i>			<i>Total</i>
	<i>Canada</i>	<i>USA</i>	<i>Overseas</i>	
Transportation	\$180,850	\$652,933	\$348,151	\$1,181,934
Accommodation	\$92,614	\$489,840	\$326,414	\$908,868
Groceries/alcohol	\$30,871	\$114,501	\$217,610	\$362,982
Restaurants	\$79,405	\$244,641	\$54,463	\$378,509
Recreation/entertainment	\$30,871	\$32,395	\$119,673	\$182,939
<i>Other spending</i>	<i>\$26,493</i>	<i>\$97,745</i>	<i>\$21,737</i>	<i>\$145,975</i>
Total	\$441,104	\$1,632,055	\$1,088,048	\$3,161,207

The total of \$3.16 million in non-resident visitor spending represents the vast majority of visitor spending attributable to Kluane NPR. It represents the spending by the estimated 75,478 non-resident visitors. The spending by the 2,334 Yukon visitors will also create an economic impact that can be included in the analysis of economic impacts associated with the park. It is more difficult to estimate the spending patterns of Yukon-based visitors, since most Yukoners make little additional expenditure over and above regular spending for a visit to the park.

In estimating the expenditures of Yukon resident visitors to Kluane NPR, it has arbitrarily been assumed that they will spend approximately half of the average amount of all visitors (\$40.00) as determined by

the 1999 Yukon Visitor Exit Survey. If this \$20 value per-person per-day is distributed over the commodity categories used by the model in a manner similar to other Canadian visitors, then the total expenditure values as shown in Table 11 below are generated.

Table 11 Total visitor spending by category and visitor origin

<i>Spending category</i>	<i>Visitor origin</i>				<i>Total</i>
	<i>Canada</i>	<i>USA</i>	<i>Overseas</i>	<i>Yukon</i>	
Transportation	\$180,850	\$652,933	\$348,151	\$19,139	\$1,201,073
Accommodation	\$92,614	\$489,840	\$326,414	\$9,803	\$918,671
Groceries/alcohol	\$30,871	\$114,501	\$217,610	\$3,267	\$366,249
Restaurants	\$79,405	\$244,641	\$54,463	\$8,403	\$386,912
Recreation & entertainment	\$30,871	\$32,395	\$119,673	\$3,267	\$186,206
Other spending	\$26,493	\$97,745	\$21,737	\$2,801	\$148,776
Total	\$441,104	\$1,632,055	\$1,088,048	\$46,680	\$3,207,887

The total estimated visitor spending associated with Kluane NPR is therefore \$3,207,887 as summarized in Table 11. These are the visitor expenditures that are used to estimate the economic impacts associated with visitor spending. The economic impacts of this spending are shown in Section 4 of this paper.

The spending data that has been used in this study is derived directly from the 1999 Yukon Visitor Exit Survey, a territorially administered (Yukon Bureau of Statistics) data collection instrument. The survey covered all types of travel – by private vehicle, boat, bus, and air – and all types of trips: pleasure, business and personal. The survey is comprehensive. In terms of the spending data, respondents are asked to indicate their spending only within the territory; they do not include the amount spent on package tours bought elsewhere or airfares paid elsewhere — *only the money spent within the territory*. It is important then to recognize that the spending figures we are using in this study do not include payments made outside Yukon — just funds spent within the territory are included in the analysis.

4 Economic impacts

In the past, the total expenditures of Kluane in each of the expenditure categories would have been used to calculate economic impacts within the Yukon. It would have been assumed that all expenditures were made within the territory and that the vast majority of impacts would have been felt in the Yukon. Table 3 above clearly indicates that this is not the case: only 78.5% of all spending can be used to calculate impacts within the territory, and 2.2% of spending – that occurring in the USA - will have no impact in Canada, let alone the Yukon.

4.1 Background

The Economic Impact Model for Parks and Protected Areas, a product of the Department of Canadian Heritage and the Canadian Tourism Commission, and originally produced by Parks Canada, was used to calculate impacts. This model has just been updated with the latest impact multipliers based on Statistics Canada data for the Yukon Territory for the commodities contained in the model using 1999 values. The model therefore reflects the current Yukon economy and its relationships/linkages with other parts of the Canadian economy.

Several approaches were used to calculate the impacts. First, the model was run using the expenditure data for each geographic area in the territory separately. In this analysis, only those expenditures determined to have been made within the territorial area were used to estimate economic impacts. Secondly, the cumulative spending within each geographic area in the Yukon was run through the model. In this analysis, the spending occurring in Haines Junction, for example, was included in the spending for the Kluane region. Finally, the spending occurring in the rest of Canada was run through the model using British Columbia as the proxy province⁵. The results of each of these approaches are described below. The spending identified to have occurred in the USA was excluded from the analysis⁶.

The economic impact model produces estimates of direct and indirect impacts. Direct impacts refer to the increased income to businesses and individuals resulting from an increase in demand for goods and services in the impact area associated with a site. Indirect impacts result from the increased production by businesses located in the impact area that supply intermediate products to industries directly involved in site related activities.

Induced impacts result from those who gained income from site related activities re-spending their income into the economy of the impacted area to purchase goods and services. However, these induced impacts are not estimated by the model. Statistics Canada has ceased to run the closed version of the Inter-provincial Input-Output model where incomes generated in the production process are fed back to the household sector and are re-spent on goods and services, including leakages (savings and imports) until the model converges to an equilibrium value. Statistics Canada now runs an open model which does not include the impacts associated with household spending. As a result, the model used to calculate Kluane NPR's economic impacts cannot estimate induced impacts.

Economic impacts can be measured in many different ways. The economic impact model used in this analysis measured impacts in four ways: gross domestic product (GDP), labour income, employment, and tax revenue. Brief definitions of each of these measures follow:

⁵ Note: if sufficient detail was available on the spending in the rest of Canada, the data could have been run through the model for each province and territory where an expenditure was made. Since this detailed data was not available, an assumed but reasonable approach was adopted.

⁶ The \$16,557 spent directly in the USA will have an impact on the American economy. But the amount of the expenditure is not great and the associated economic impacts would not be expected to be significant.

Gross Domestic Product: this measure includes labour income (as defined below) and the income of incorporated businesses (profits), net of taxes and subsidies on production. It actually represents the net value of production (or value added) within the Yukon from the spending identified.

Labour Income: this measure includes worker's wages (amount of wages and salaries paid to individuals), supplementary labour income and the net income of unincorporated businesses.

Employment: employment is measured in Full-time Equivalent (FTE). One FTE equals one year of work for one person.

Tax Revenue: this measure is derived from the tax on products (including GST, PST, manufacturers sales tax, harmonized sales tax, amusement taxes and excise taxes) and the tax on production (made up of property taxes, licences and permits). It does not include income tax.

Another feature of the economic impact model used for this analysis is that these impact measures are used to calculate impacts both within the territory and outside the territory. The model also has built in factors to account for inflation. Results are reported by the model in terms of direct, indirect and total impacts. All impacts are converted to the base year 2000, i.e. impacts are reported in constant year 2000 dollars. Since the impacts are calculated on the basis of the economy of the whole territory, when examining the impacts for smaller areas (Haines Junction and Kluane region), only direct impacts will be reported. This gives a higher reliability of impact estimate.

4.2 Individual Yukon area impacts

Table 12 below summarizes the results of the economic impact analysis for the three areas of the Yukon used in the analysis for the spending by the Park only. Note that impacts felt within and outside the Yukon Territory are included in the results. Also the 'Expenditure' line is for reference only; it indicates the total expenditure from which the impacts have been generated.

Table 12 presents results for each area separately. Even though Haines Junction lies within the Kluane Region and the Kluane region falls within Yukon, the results presented above are non-cumulative and reflect the impacts associated with spending occurring in that geographic area only. The Haines Junction area has the largest GDP impact due to the salaries paid in the area; while the Kluane region has the least impact due to the low level of spending in the region outside Haines Junction. Spending in the 'Rest of Yukon' produces a significant impact on the rest of the territory, although in reality most of these impacts are felt by Whitehorse. Out of territory impacts are fairly significant: they are equal or greater than those felt in each of the areas considered.

Table 12 Economic impact of Kluane NPR spending by geographic area (constant 2000 dollars)

<i>Impacts</i>	<i>Within Yukon</i>			<i>Outside Yukon**</i>		
	<i>Haines Junction*</i>	<i>Kluane region*</i>	<i>Rest of Yukon**</i>	<i>Haines Junction</i>	<i>Kluane region</i>	<i>Rest of Yukon</i>
Expenditure	\$1,502,612	\$8,228	\$355,344	Not applicable		
GDP	\$1,349,000	\$2,000	\$114,000	\$49,000	\$3,500	\$117,000
Labour income	\$1,303,000	\$1,700	\$87,000	\$29,000	\$2,600	\$76,000
Employment (person-years)	29.9	0.1	2.4	0.8	0.1	2.3
Tax revenue	\$6,300	\$100	\$7,980	\$2,940	\$170	\$7,370

Note: Tax revenue includes only property and excise taxes, not income tax.

* Direct impacts only reported

** Direct and indirect impacts reported.

The calculation of visitor spending was based on data that was derived from the 1999 Yukon Visitor Exit Survey for the Kluane Region as a whole. In estimating the economic impacts associated with visitor spending, it has been assumed that 75% of the spending occurred in Haines Junction and the remaining 25% of the spending occurred within other areas of the region. Based on this assumption, Table 13 provides a summary of the economic impacts from visitor spending in each of the three areas.

Table 13 Economic impacts of Kluane NPR visitor spending by geographic area (constant 2000 dollars)

<i>Impacts</i>	<i>Within Yukon</i>			<i>Outside Yukon**</i>		
	<i>Haines Junction*</i>	<i>Kluane region*</i>	<i>Rest of Yukon</i>	<i>Haines Junction</i>	<i>Kluane region</i>	<i>Rest of Yukon</i>
Expenditure	\$2,405,915	\$801,972	-	Not applicable		
GDP	\$330,000	\$110,000	-	\$940,000	\$313,000	-
Labour income	\$266,000	\$89,000	-	\$583,000	\$194,000	-
Employment (person-years)	8.6	2.9	-	18.2	6.1	-
Tax revenue	\$32,500	\$11,000	-	\$77,000	\$26,000	-

Note: Tax revenue includes only property and excise taxes, not income tax.

* Direct impacts only reported.

** Direct and indirect impacts reported.

The attributable spending of visitors used to calculate economic impact is substantial — over \$3.2 million in 1999. The majority of this spending attributable to the park was assumed to occur in the Haines Junction area, where there are the most visitor goods and services. The structure of the Yukon’s economy — its reliance on goods and services from other areas — is indicated in the relatively low economic impacts within each of the areas, and the relatively high economic impacts experienced outside the territory. Although only direct impacts are reported for Haines Junction and the Kluane region, these impacts will reflect the vast majority of impacts produced and retained within these two areas from visitor spending.

It should be noted that the expenditure within the Kluane region represents the total spending by visitors to Kluane NPR. It is possible and conceivable that spending in other areas of the Yukon can be attributed to Kluane — either by visitors on their way to Kluane or after their visit to Kluane. However, without any park visitor surveys to substantiate the extent of this spending, it is more reasonable to assume this spending is minimal and to attribute 100% of each visitor-day spending within the Kluane region to the park. This may under-represent total visitor spending to an indeterminate but believed small extent.

Table 14 below summarizes the combined impacts from Kluane NPR and visitor spending generated within each geographic area individually. Haines Junction enjoys a substantially and relatively larger GDP and Labour Income impact due to the salaries paid to park staff. Without these salaries being paid locally, there would be greater economic impacts outside the territory from park and visitor spending than occurs within the territory. Salaries, therefore, are an important contributor to local area economy.

Table 14 Total economic impacts of Kluane NPR by geographic area (constant 2000 dollars)

<i>Impacts</i>	<i>Within Yukon</i>			<i>Outside Yukon**</i>		
	<i>Haines Junction*</i>	<i>Kluane region*</i>	<i>Rest of Yukon**</i>	<i>Haines Junction</i>	<i>Kluane region</i>	<i>Rest of Yukon</i>
Expenditure	\$3,908,527	\$810,200	\$355,344	Not applicable		
GDP	\$1,679,000	\$112,000	\$114,000	\$988,000	\$317,000	\$117,000
Labour income	\$1,569,000	\$90,000	\$87,000	\$612,000	\$197,000	\$76,000
Employment (person-years)	38.5	3.0	2.4	19.0	6.2	2.3
Tax revenue	\$39,000	\$11,000	\$7,980	\$80,000	\$26,000	\$7,370

Note: Tax revenue includes only property and excise taxes, not income tax.

* Direct impacts only reported

** Direct and Indirect impacts reported

4.3 Cumulative Yukon Area Impacts

Instead of treating each geographic impact area as separate or discrete areas, but adding impacts as the geographic area included in the analysis is expanded, cumulative economic impacts can be calculated. Table 15 presents a summary of these cumulative impacts related to Kluane NPR's expenditures only.

Table 15 Cumulative economic impact of Kluane NPR spending (constant 2000 dollars)

<i>Impacts</i>	<i>Within Yukon</i>			<i>Outside Yukon**</i>		
	<i>Haines Junction*</i>	<i>Kluane region*</i>	<i>Yukon**</i>	<i>Haines Junction</i>	<i>Kluane region</i>	<i>Yukon</i>
Expenditure	\$1,502,612	\$1,510,840	\$1,866,184	Not applicable		
GDP	\$1,349,000	\$1,351,000	\$2,006,000	\$48,600	\$52,000	\$169,000
Labour income	\$1,303,000	\$1,305,000	\$1,721,000	\$28,900	\$32,000	\$108,000
Employment (person-years)	29.9	30.0	43.9	0.8	1.0	3.3
Tax revenue	\$6,340	\$6,440	\$14,400	\$2,950	\$3,100	\$10,500

Note: Tax revenue includes only property and excise taxes, not income tax.

* Direct impacts only reported

** Direct and Indirect impacts reported.

Table 15 shows that the impacts in Haines Junction form the majority within the territory, as indicated from the previous section. A very high percentage of the impact is related to labour income, i.e. the wages and salaries paid by Kluane NPR. Another interesting result is that the taxes generated from all the spending in Yukon is only \$4,000 more than the taxes this spending generates outside the territory.

Table 16 below presents the cumulative visitor spending impacts.

Table 16 Cumulative economic impact of Kluane NPR visitor spending (constant 2000 dollars)

<i>Impacts</i>	<i>Within Yukon</i>			<i>Outside Yukon**</i>		
	<i>Haines Junction*</i>	<i>Kluane region*</i>	<i>Yukon**</i>	<i>Haines Junction</i>	<i>Kluane region</i>	<i>Yukon</i>
Expenditure	\$2,405,915	\$3,207,887	\$3,207,887	Not applicable		
GDP	\$330,000	\$440,000	\$591,000	\$940,000	\$1,253,000	\$1,253,000
Labour income	\$266,000	\$355,000	\$448,000	\$583,000	\$777,000	\$777,000
Employment (person-years)	8.6	11.5	13.6	18.2	24.3	24.3
Tax revenue	\$32,500	\$43,300	\$43,300	\$77,400	\$103,200	\$103,000

Note: Tax revenue includes only property and excise taxes, not income tax.

* Direct impacts only reported

** Direct and Indirect impacts reported.

Table 16 shows that substantial visitor spending produces relatively small impacts on the local and Yukon economies. Visitor spending is approximately 4.5 times larger than spending by the park, but the impact of this spending is substantially less. Further, the largest impacts from visitor spending in the Yukon are felt outside the territory — in all impact measures.

Table 17 summarizes the total impacts generated within each geographic area on a cumulative basis.

Table 17 Total cumulative economic impacts of Kluane NPR (constant 2000 dollars)

<i>Impacts</i>	<i>Within Yukon</i>			<i>Outside Yukon**</i>		
	<i>Haines Junction*</i>	<i>Kluane Region*</i>	<i>Yukon**</i>	<i>Haines Junction</i>	<i>Kluane Region</i>	<i>Yukon</i>
Expenditure	\$3,908,527	\$4,718,727	\$5,074,071	Not applicable		
GDP	\$1,679,000	\$1,791,000	\$2,597,000	\$988,400	\$1,305,200	\$1,422,500
Labour Income	\$1,569,000	\$1,660,000	\$2,168,000	\$612,000	\$809,000	\$885,000
Employment (person-years)	38.5	41.5	57.5	19.0	25.3	27.6
Tax Revenue	\$38,800	\$49,700	\$57,700	\$80,000	\$106,000	\$113,700

* Direct impacts only reported

** Direct and Indirect impacts reported

The economic impacts reported in Table 17 show that the economy of the territory benefits from the spending of Parks Canada on development and operations of the park, as well as the spending of park visitors. Territorial GDP is increased by \$2.5 million, labour income is enhanced by \$2.2 million and over 57 years of employment are generated from this spending. In addition, territorial governments gain over \$57,000 in tax revenue from this spending. These impacts are somewhat smaller within the smaller areas of Haines Junction and the Kluane region. They are still significant impacts to these economies.

Table 17 also shows that the spending occurring in Yukon attributable to Kluane NPR has a significant impact in areas outside the territory. In the case of tax revenue, these impacts are greater in areas outside the Yukon – almost twice those in the territory.

4.3.1 Regional GDP impacts

Table 18 below shows how large a role the GDP impacts of KNPR — as shown in Table 17 above — play in relation to the size of the local, regional, and territorial economies.

Table 18 GDP Contribution of Kluane NPR to the economies of Haines Junction, Kluane region and the Yukon

	Haines Junction	Kluane region	Yukon
GDP related to KNPR	\$1,679,000	\$1,791,000	\$2,597,000
GDP of area economy	\$24,035,000	\$31,357,000	\$1,124,000,000
KNPR-related GDP as % of area GDP	7.0%	5.7%	0.2%

As might be expected, the park has its greatest effect upon the local Haines Junction economy and as the area of economic activity is broadened, the park's economic significance is reduced.

Although the KNPR's contribution of 5.7% to 7.0% to regional and local GDP may appear small, it is actually quite significant. In the context of the Yukon's economy, the construction sector, the retail trade sector, and the health care sector each contribute approximately 6% or 7% to the territory's GDP. Not overwhelmingly large, but significant.

4.4 Impacts of spending Outside

As indicated in Table 3, a total of \$142,764 of Kluane NPR's 2002-03 budget was spent Outside. Using the impact multipliers for British Columbia as a reasonable substitute for the "Rest of Canada," a series of impacts have been calculated for this spending. These impacts are presented in Table 19 below.

Table 19 Economic impacts of Kluane NPR spending outside the Yukon (constant 2000 dollars)

<i>Impacts</i>	<i>Within BC</i>			<i>Other Provinces/Territories</i>		
	<i>Infrastructure</i>	<i>O & M</i>	<i>Total</i>	<i>Infrastructure</i>	<i>O & M</i>	<i>Total</i>
Expenditure	\$1,170	\$141,594	\$142,764	(Not Applicable)		
GDP	\$700	\$77,000	\$77,700	\$130	\$24,700	\$24,830
Labour income	\$560	\$58,500	\$59,060	\$80	\$16,200	\$16,280
Employment (person-years)	0	1.8	1.8	0	0.5	0.5
Tax revenue	\$59	\$4,090	\$4,140	\$7	\$1,400	\$1,407

Note: Tax revenue includes only property and excise taxes, not income tax.

* British Columbia has been used to estimate impacts.

Table 19 shows that the economic impacts of Kluane NPR's spending outside the territory are not substantial. The estimated impacts amount to \$78,000 in GDP, \$59,000 in labour income and just under 2 FTEs of employment. Tax impacts amount to just over \$4,000.

5 Other national park comparisons – economic impacts

We examined the economic impacts of several other established national in order to help develop an understanding of the relative performance and significance of Kluane NPR's economic impacts. The established national parks selected for comparison were Pukaskwa National Park, Grasslands National Park, Wood Buffalo National Park, Klondike National Historic Sites and Nahanni National Park. The northern parks represent various features that in some ways are comparable to Kluane and the southern parks provide an indication of impacts in areas closer to larger population centres, but still located some distance from them. Very brief descriptions of these parks and the summary results of economic impact studies are presented here.

5.1 Pukaskwa National Park

5.1.1 Situation

Pukaskwa is located in Ontario on the east shore of Lake Superior. The park was officially dedicated in 1978 and opened to visitors in 1983. It is Ontario's largest national park, covering 1,878 square kilometres. The park features the rugged coastline of Lake Superior as well as inland wilderness experiences. Most visitor activity, however, is oriented to the lake. This is accomplished in two different ways: a "frontcountry" and a "backcountry." The frontcountry area provides camping facilities and other common facilities and services found in national parks. The backcountry area is used primarily by hikers, canoeists, kayakers, and other boaters through a series of primitive campsites and a system of trails.

Pukaskwa is west of the Trans-Canada Highway, a distance of approximately 20 kilometres. The closest settlement is the town of Marathon; there are no close major population centres. Thunder Bay is several hundred kilometres to the west and Sault Ste. Marie is several hundred kilometres to the southeast. Other small communities in the area have a high proportion of First Nations residents. There are several significant provincial parks in the area of Pukaskwa; notably, Lake Superior Provincial Park, Obatanga Provincial Park, and a series of smaller provincial parks which are used by travellers of the Trans-Canada Highway.

5.1.2 Economic effects

A study prepared in the early 1990's by Environment Canada, Parks (now Parks Canada) estimated the economic impacts associated with the establishment of Pukaskwa National Park on the local area. The analysis used the Tiebout model to make these estimates which covered the period of park opening (1983) to 1990. The analysis found that over the eight (8) year period of the study, the park produced a cumulative impact of \$10 million in labour income and 387 person-years of employment. Averaging the total values over the period indicated that average annual labour income was \$1.2 million and employment was 48 FTEs. The study concluded that the Park's contributions would be on-going and should be considered an important contributor to the economies of the surrounding communities.

5.2 Grasslands National Park

5.2.1 Situation

Grasslands is located in the south of Saskatchewan, bordering on the United States. It is comprised of two parcels of prairie with a total area of 907 square kilometres. Current land holdings amount to over 50% of the proposed total lands for the park. The park was established in 1988 through an agreement between the provincial and federal governments. The closest community of size is Swift Current, 125 kilometres away. There are smaller local communities; the closest being Val Marie, which houses a park information

centre. Depending on which part of the park one visits, from Val Marie it is either a ten minute drive or twenty minute drive. Main landscape features are prairie and 'badland' formations.

Grasslands has an undeveloped character but presents a variety of recreational opportunities: day hiking, horseback riding, overnight backpacking, no-trace camping, nature viewing and photography. Road access is limited to existing roadways and there is no opportunity for mechanized off-road activities.

5.2.2 Economic effects

A study prepared prior to creation of Grasslands National Park described a series of expected impacts from the establishment of the national park. This study looked at different periods after park establishment and predicted various impacts – both positive and negative. Table 20 summarizes these impacts for the local area and the province of Saskatchewan.

**Table 20 Economic impacts associated with the establishment of
Grasslands National Park, 1974**

	<i>Total positive impacts</i>	<i>Total negative impacts</i>	<i>Net impacts</i>
Year 5			
Local area	\$1,451,300	\$115,700	\$1,335,600
Rest of Province	\$6,734,000	-	\$6,734,000
Year 10			
Local area	\$2,186,300	\$243,400	\$1,942,900
Rest of Province	\$10,200,100	-	\$10,200,100
Year 20			
Local area	\$600,100	\$472,900	\$128,200
Rest of Province	\$395,500	-	\$395,500

The negative impacts considered by this study included the reduction in the local spending of displaced ranchers (groceries, etc.), the loss of ranch business spending, and municipal revenue lost from the reduction in local sales, as well as the displacement of ranchers. The positive impacts included in the study were the spending of tourists, federal construction expenditures, federal operations and maintenance expenditures and provincial expenditures on operations and maintenance. As the table indicates the analysis produced a net positive impact not only locally but to the province as a whole.

5.3 Wood Buffalo

5.3.1 Situation

Wood Buffalo National Park was created in 1922 to protect the last remaining herds of wood bison in northern Canada. Plains bison were shipped to the park between 1925 and 1928. These bison promptly moved south into the Peace-Athabasca delta area and in 1926 the park boundary was expanded to include this area. The park, which straddles the NWT-Alberta border, protects one of the largest free-roaming self-regulating bison herds in the world.

The park is one of the largest in the world and the largest in Canada, covering 44,807 square kilometres. The park headquarters are located in Fort Smith, NWT, with a sub-office at Fort Chipewyan, Alberta. The communities around the park are mostly made up of First Nations people – Cree, Chipewyan, Metis - as well as non-Aboriginal people.

Today, the park supports and protects many unique natural and cultural resources, from diverse ecosystems and rare species to the traditional activities of Aboriginal residents. The park has few facilities but supports camping, day-use activities, canoeing, wildlife viewing, fishing, hiking, boating and winter activities. There is an all-season road to access the park from Fort Smith, 60 kilometres to the north, but other access is limited.

5.3.2 Economic effects

A study published in 1995 to update earlier work on the economic impact of northern national parks and historic sites included Wood Buffalo National Park among the parks examined. The report indicated that the level of visits was much higher in the early 1990 compared to recent years: around 7,000 compared to around 1,000 more recently. The study found that average daily expenditures by park visitors was \$81.19 in 1992 dollars. It also found that there were 4,297 non-resident visitors for whom total spending amounted to \$349,000.

This study also reported that Parks Canada spending amounted to nearly \$4.65 million to operate and maintain the park. Thirty-seven percent of the budget (\$1.67 million) was spent on firefighting which employed 30 persons (20.5 FTE). The staff payroll for operations was \$2.04 million which covered 36 full time and 21 seasonal staff. In 1992-93 40 people of native ancestry were employed by the park.

The economic impact associated with the spending by the park and visitor expenditures were estimated as follows:

GDP to NWT	\$2,927,000
Labour Income	\$2,686,000
Employment	70 FTE

5.4 Klondike National Historic Sites

5.4.1 Situation

The Klondike National Historic Sites, located in Dawson, Yukon, present a composite of artefacts and sites which commemorate the history of the Klondike Goldrush and its impact on the Canadian economy. Dawson City was established as the commercial centre of the goldrush. Many of the downtown buildings have been restored to recreate the atmosphere of the boom years 1898 and 1899. Some of the historic sites also recreate the social and cultural history of the period. For example, visitors can attend readings of the poetry of Robert Service in the poet's own cabin, while the Palace Grand Theatre offers a nineties-style music hall show.

The Klondike National Historic Sites attract visitors from around the world. The sites represent one of several features that visitors to the north visit as a planned stop-over. As expected, attendance is highly seasonal, with May to September being the prime period of visits. Surveys conducted some years ago (1987) produced estimates of visitor spending related to the sites which amounted to approximately \$7 million. A 1995 published study found that Parks Canada spent a total of \$2.9 million in 1992 on these sites.

5.4.2 Economic effects

The economic impact associated with the spending by the park and visitor expenditures were estimated as follows:

GDP to Yukon	\$4,805,000
Labour Income	\$3,722,000
Employment	199 FTE

5.5 Nahanni National Park

5.5.1 Situation

Located in the Mackenzie Mountains Natural Region of the Northwest Territories, Nahanni National Park is a superb 4,756 square kilometre wilderness area whose outstanding features earned it recognition as the first officially designated World Heritage Site. The long narrow park is characterized by strikingly different landscapes, notably the valley of the South Nahanni River, known as one of the world's finest wild rivers. There are no roads to the park; access is by air or water only.

In the upper reaches of the South Nahanni River, the river flows through rugged, tundra-capped mountains supporting habitat for Dall sheep, mountain sheep and caribou. Here too are found some of the several hot springs that dot the park. The 20°C water of the Rabbitkettle Hot Springs radiates outwards to form impressive terraces of tufa rising almost 30 metres above the Rabbitkettle River. Further downstream the South Nahanni plunges 91 metres over Virginia Falls and flows on for several kilometres in a turmoil of rapids, standing waves and whirlpools.

Nahanni contains more than 40 species of animals, including grizzly and black bear, wolf, woodland caribou and beaver. There are more than 120 species of birds, including golden eagle and trumpeter swan, and at least 13 species of fish, including grayling and Dolly Varden.

Since its establishment as a national park reserve in 1972, Nahanni has experienced little in the way of traditional visitor facility developments. Other than at Virginia Falls there are no formal overnight facilities and no campgrounds. The Nahanni River in the park provides superb opportunities for water-based recreation which can be pursued on an individual basis or under the guidance of a river outfitter.

Visitor numbers are relatively stable at around 1,200 visits per year. Total visitor spending in 1992-93 was estimated at \$1.4 million. Parks Canada spending in this fiscal year was just under a million dollars at \$915,000.

5.5.2 Economic effect

The economic impact associated with the spending by the park and visitor expenditures were estimated as follows:

GDP to NWT	\$1,078,000
Labour Income	\$852,000
Employment	39 FTE

5.6 Summary

Many other national parks could have been compared with Kluane National Park and Reserve. However, as is obvious from the description of each park presented above, no two parks are the same; each has its own features specific to it. As a result, the comparisons are not really legitimate. Each park will exhibit characteristics which will make it unique and will have a history which will reflect past influences on its development and evolution.

What is important to recognize is that each park exhibits important linkages with the local economy and is considered an important asset within the areas in which they are located. The same holds true for Kluane NPR: it is an important economic generator for the region.

It should be noted that no information, studies or reports were available on any of the parks used for comparison that described the economic benefits of these parks. It is the quantification of these economic benefits, as opposed to the strictly financial impacts, which are becoming increasingly important to consider. Economic impact analysis has a limited use, even though it is a widely accepted measure of economic significance.

6 Summary

Table 21 provides a cumulative roll-up of the full range of economic impacts associated with attributable spending from Kluane NPR. Effectively, this table combines the results presented in Table 17 and Table 19 in a non-duplicative manner.

**Table 21 Summary of economic impacts associated with Kluane NPR
(constant 2000 dollars)**

<i>Impacts</i>	<i>Within Yukon</i>			<i>Outside Yukon**</i>
	<i>Haines Junction*</i>	<i>Kluane region*</i>	<i>Yukon**</i>	
Expenditure	\$3,908,527	\$4,718,727	\$5,074,071	\$142,764***
GDP	\$1,679,000	\$1,791,000	\$2,597,000	\$1,525,000
Labour income	\$1,569,000	\$1,660,000	\$2,168,000	\$960,500
Employment (person-years)	38.5	41.5	57.5	29.9
Tax revenue	\$38,800	\$49,700	\$57,700	\$119,200

Note: Tax revenue includes only property and excise taxes, not income tax.

* Direct impacts only reported

** Direct and Indirect impacts reported.

*** Amount actually spent outside Yukon; impacts reported include impacts from spending in Yukon as well as outside Yukon.

Table 21 is a composite of all spending and impacts. The key comparisons are between the impacts reported for 'Yukon' and 'Outside Yukon.' The table shows that while economic impacts outside Yukon, as measured by GDP, labour income and employment, are about half those in Yukon, tax revenues are significantly larger. In sum, the economic impacts associated with Kluane NPR are significant for both the Yukon Territory and for other parts of Canada.

Data availability is always an issue. By necessity, certain assumptions must be made and these are explained above. The estimate of visitor numbers and actual spending that can be attributed to the presence of the Park is an example. To avoid the charge of bias, and overstatement of positive impacts, we have taken a prudent approach in choice of what to include in the overall impacts, choices that tend to decrease the final estimate of total economic impacts. These choices are:

- Impacts for Haines Junction and the Kluane region are for direct impacts, with no estimate of indirect impacts,
- There is no estimate of induced impacts included in the total impacts in all areas, and
- There are no estimates for non-monetary values (e.g. ecological services, existence, option, and bequest values) included in the economic impact analysis. (See the *Economic Benefits Framework Background Paper* for a brief summary of some of the societal and personal economic benefits of KNPR).

7 References

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