

The Economic Impact of Canada's National, Provincial and Territorial Parks (2009)

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Introduction

SINCE THE CREATION OF NATIONAL, STATE, PROVINCIAL, AND TERRITORIAL PARK SYSTEMS ACROSS North America over the last 125 years, we have benefited in many different ways as a society, community, family and individually. Parks provide opportunities for families to be together, to learn about nature and to enjoy healthful outdoor recreation. Parks contribute to our sense of identity and place, and we consider them an important legacy to pass on to future generations.

They provide a board range of ecological services. They produce clean water and air, protect critical habitat for species-at-risk and maintain healthy, diverse and resilient ecosystems upon which our own health depends. Parks also generate economic activity, supporting tourism, providing sustainable jobs, generating tax revenue to governments and diversifying the economy, particularly in rural and remote areas.

The purposes of this paper are the following:

1. Provide an overview of the economic benefits framework used by the Canadian Parks Council.
2. Describe the input-output model used by the Council and data required to calculate the economic impact of park and visitor expenditures.
3. Report on the results and significance of total park agencies and visitor spending on the national, provincial and territorial economies of Canada in 2009.

The economic benefits framework

In 1998 the Canadian Parks Council, made up of federal, provincial, and territorial park agencies directors, identified the need to develop a common framework for measuring the economic value of parks. The purpose of the framework was to develop standard measures, and ultimately methodologies, that could be used by member agencies to assess the wide array of economic benefits provided by parks. Summarized in Table 1, the framework included not only traditional economic measures of *commercial benefits*, such as Gross Domestic Product, employment, wages and tax revenue, but also *personal benefits*, such as direct use and non-use/passive values, and *societal benefits*, such as ecological services (clean water and air, carbon capture, etc).

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	Personal	Commercial	Societal
Definition	benefits accrued to individual users & non-users	benefits derived from the re-distribution of commercial activity from one area to another	benefits accrued to society as a whole which exhibit a “public or common good “
Components	use values -direct use -indirect use non-use/passive values -option value -existence value -bequest value	impacts from agency & visitor expenditures for the development, operation and use of parks	ecological services resource integrity health effects quality of life scientific educational community
Measures/Examples	contingent valuation willingness to pay visitor satisfaction use levels	gross domestic product employment labor income tax revenue	substitute value for clean water & air carbon credits re-forestation

Table 1. Total economic benefits of parks framework.

Economic impact model for Canadian parks

In 2007 the Parks Council started a multi-year project to estimate the commercial benefits or economic impacts in 2009 of Canada’s parks. The Outspan Group, an Ontario consulting firm, developed the Economic Impact Model for Parks (EIMP) which was used to undertake the 2009 analysis. The model is an on-line analytical tool (<http://174.143.205.154/miep-eimpa/>) that can be used to evaluate the economic impacts of Canadian park agencies and visitor expenditures at various scales. This includes entire agency operations (national, provincial, or territorial park systems), individual parks (existing or proposed), major capital investment (interpretive centres, campgrounds, trails, etc.) as well as specific activities (performances, events, and festivals). Economic impacts are calculated within and outside the province or territory in which the park or capital investment is located, or where the event took place. The model uses 2006 coefficients and multipliers created by the Statistics Canada Inter-provincial Input-Output Model. The Statistics Canada Inter-provincial Input-Output Model was chosen because it takes into account the trade flows of goods and services among the provinces and territories, and it provides comparable coefficients for each province and territory.

This input-output model shows in tables: the production of goods and services by each sector of the economy in each province and territory, the utilization of goods and services by each sector of the economy in each province and territory, and the flows of goods and services between provinces and territories. From these tables a series of input-output coefficients are created that relate production in a given industry/sector to the industries/sectors providing it with the required inputs. Multipliers are then calculated to trace the effects of an increase in the demand for a specified commodity through the provincial and territorial economies. These effects are measured in terms of *labour income*, *gross domestic product*, *level of employment*, and *tax revenues*. The model calculates the *direct*, *indirect*, *induced impacts*, and total effects for each unit of impact measurement, for each contributing organization and for each visitor market segment.

The EIMP uses a standardized set of expenditure categories associated with a site or an event that reflects spending by parks agencies and visitors in order to perform economic impact calculations. The economic impacts are calculated on the basis of the following expenditures: agency purchases of goods and services, agency expenditures for infrastructure, agency payment of wages and salaries and the spending of visitors attributable to a park, facility, or an event.

Required data for the model

Whether assessing the economic impact of an existing park, an event that has already taken place, or a project that is planned for the future, expenditure data are required from either administrative records, surveys and/or estimates, as well as from all private sector, public sector and not-for-profit partners. Data required for park *operations* includes public utilities, printing and publications, supplies, professional services, business services, and travel and transportation. Data required for agencies' capital expenditures includes repairs/renovations, staff housing, non-residential buildings, access roads, major equipment purchases, other construction and professional services. Agencies also supply *salary and wages*, benefits, honorarium and training cost data.

Most park agency accounting systems can readily identify or build up the expenditure data required for operations. The user's guide for the model provides clear definitions of what expenditures are included (or not) in each of the categories; and, as such, provides reasonably accurate data. However, the identification of visitor expenditures is more complex; and, typically requires the collection of a wider variety of data to build an overall estimate. Administrative data such as visitor counts, survey data, or approximate estimates (with clear assumptions and rationale) are used to generate visitor expenditures. In gathering visitor spending data, only spending related to the targeted park or event is considered relevant. Therefore, only spending within the jurisdiction (province or territory) in which the park is located or in which the event takes place was used in this study. The model can also apportion a percentage of visitor expenditures depending on the level of motivation attributable to park or event (i.e., a destination visit to the park versus a variety of other reasons for being in the area).

The amount spent by visitors on goods and services is broken down by the following categories ideally for each visitor segment (i.e., day use, overnight, front country, etc): transportation(vehicle, rental, air), food and beverages(restaurants, store bought), accommodations, recreation and entertainment.

The economic impacts of Canada's national, provincial and territorial parks

Park agency and visitor expenditure data for 2009 are summarized on Tables 2 and 3. In total, Canada's parks agencies spent over \$772 million in 2009 on operations, capital investment, and salaries and wages. These direct expenditures are significant to local communities in terms of employment and income. This is particularly true in remote locations where employment opportunities can be scarce. While overall federal and provincial/territorial agency spending is virtually the same, the split between operating costs and capital investment is significantly different. Provinces and territories spent a third less in operations, but three times more in capital investment. Wages and salaries paid were similar between the provinces/territories and federal categories.

Total visits to Canada's parks in 2009 were calculated to be some 70 million. Those visitors spent an estimated \$4.4 billion on transportation, food and beverages, accommodation and other items. These expenditures are directly injected into Canada's tourism and service sectors. Visitor expenditures are significantly higher than those of the park agencies. Overall for every dollar of agency funding spent on parks, \$5.70 is returned to the Canadian economy through visitor expenditures. This agency to visitor spending ratio varies from the lowest in relatively remote, expensive to operate and visit locations such as the Yukon (\$1:\$1.5) to easy to access, destination areas such as Alberta (\$1:\$7.80).

Jurisdiction	Operations	Capital	Wages & Salaries	Total
Provinces/Territories	\$111,672.30	\$107,675.70	\$164,631.60	\$383,979.70
Federal	\$168,660.30	\$32,471.80	\$186,978.10	\$388,110.20
Total	\$280,332.60	\$140,147.50	\$351,609.70	\$772,089.90

Table 2. Park agency expenditures, 2009 (\$1000).

Jurisdiction	Transport.	Accommo.	Food/Bev	Other	Total
Provinces/Territories	\$471.00	\$282.20	\$602.10	\$598.70	\$1,953.70
Federal	\$644.10	\$495.20	\$705.10	\$607.00	\$2,451.40
Total	\$1,115.10	\$777.40	\$1,307.20	\$1,205.70	\$4,405.10

Table 3. Visitor expenditures, 2009 (\$1,000,000).

In turn, these park agency and visitor expenditures create substantial and recurring impacts on the Canadian economy, creating jobs, generating income for local business and producing tax revenue for governments (Table 4). The combined \$5.2 billion in agency and visitor spending added \$4.6 billion to Canada's Gross Domestic Product (GDP). This amount of GDP had a labor income component of \$2.9 billion and created an equivalent of 64,000 full-time jobs. The impact assessment also showed that \$337 million was returned in taxes to the three levels of government (federal, provincial/territorial, and local). As would be expected, Table 4 shows that the higher visitor spending had a significantly greater impact by four times on GDP compared to park agency expenditures.

Each level of government receives a comparable amount of tax revenue (municipal governments: \$119.1 million, provincial/territorial \$121.4 million and federal \$96 million) totaling \$337 million. However municipal governments are the real beneficiaries as these are net revenues not reduced by operating expenses which are incurred at the national, provincial, or territorial levels.

The leveraging effect of agency expenditures is further increased when tax revenues are added to visitor expenditures. The ratio grows from 1:5.7 to 1:6.15, or approximately an additional 10%. Not included in this ratio are the park fees collected which for some jurisdictions are significant. The fee revenue to operation cost ratio varies widely between agencies depending on visitation, fee structures and payment compliance levels. In smaller, remote northern jurisdictions such as the Yukon, revenues collected cover only 20% of operating costs while in larger, southern jurisdictions such as Ontario operational cost recovery is as high as 80%.

Challenges related to economic impact analysis

Counting visitors. Accurately counting visitors can be expensive and time consuming. In many cases, groups of visitors such as day users are not included because an effective and efficient means to count them does not exist.

Understanding visitors. Knowing who the visitors are, what motivates them to visit parks, what they do and for how long, and what they spend when visiting a park requires expensive and time consuming visitor surveys.

Apportioning visitor expenditures. Accurately apportioning expenditures to the park visited can be difficult. This is straightforward if the visitor confirms that the sole purpose for the visit was the park. But, if visiting friends or family or other places, then determining the split is more difficult.

Keeping input-output models current. Maintaining the input-output models current with relatively up to date coefficients can be costly, especially if the model is purpose-designed, such as for parks.

Economic Impact	Federal	Provinces/Territories	Total
GDP	\$2,541.7	\$2,031.4	\$4,573.1
Labor income	\$1,606.4	\$1,276.7	\$2,883.1
Tax revenue	\$171.8	\$165.2	\$337.0
Employment (FTE)	34,989	28,989	63,978
GDP Impacts by:	Federal	Provinces/Territories	Total
Visitors	\$2,068.4	\$1,571.7	\$3,640.1
Park Agency	\$473.3	\$459.7	\$933.0

Table 4. Economic impacts of Canada’s parks, 2009 (\$1,000,000).

Common data collection. A multi-jurisdictional analysis faces the challenge of standardized data collection. Park agency expenditure accounting systems vary significantly. As well, how visits are counted between jurisdictions differ.

Comparing study results. Comparing study findings to other park or other industry studies, such as forestry or mining, must be done cautiously, if at all. For instance, the impacts calculated by EIMP are derived from “value added” measures, and are considered relatively conservative. This approach eliminates multiple counting of the value of goods and services involved in the production chain, and then the final sale which is a measure of “gross output.” “Gross output” and/or use of “total sales” measure the sum of all transactions leading to the final sale of goods and services, and accordingly will be considerably larger than using the “value added” measure.

Conclusions

Parks are important economic generators. The economic impacts (direct, indirect and induced, GDP/value added, income, jobs, and taxes) are significant and re-occurring at all levels: local, provincial/territorial, and nationally. Local economic impacts related to job creation and wage earnings are particularly significant in smaller, more remote communities where unemployment rates can be high.

Parks are a good investment. The leveraging effect of park agencies’ expenditures in generating visitor expenditures in the tourism and service sectors is significant, with average ratios varying from 1:1.5 to 1:8, averaging 1:6 nationally. This leveraging effect is further enhanced when the tax revenues and park fees are included as additional offsets to the agencies’ annual operating expenditures.