



Benefits of Parks and Protected Areas

The Outspan Group

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Economic Framework Project
Report 251- e



The Canadian Parks Council is an organization consisting of senior managers representing Canada's national, provincial and territorial parks agencies. It provides a Canada-wide forum for inter-governmental information sharing and action on parks and protected areas that:

- *promotes excellence in parks and protected areas planning and management;*
- *advocates parks and protected areas values and interests;*
- *encourages cooperation and provides support to member agencies on parks and protected areas issues and initiatives.*

The Canadian Parks Council (CPC), known until 2002 as the Federal Provincial Parks Council (FPPC), was established in 1961, as a result of the *Resources for Tomorrow* conference. Current strategic directions of the Council include:

1. ADVANCING THE PROTECTION EFFORTS OF MEMBER AGENCIES;
2. PROMOTING HERITAGE APPRECIATION AND COMMUNICATIONS ABOUT PARKS AND PROTECTED AREAS;
3. SUPPORTING AGENCIES' EFFORTS TO ADDRESS ABORIGINAL PEOPLES' INTERESTS IN PARKS AND PROTECTED AREAS;
4. SUPPORTING ECOLOGICALLY SUSTAINABLE TOURISM RELATED TO PARKS AND PROTECTED AREAS;
5. FACILITATING EFFECTIVE MANAGEMENT OF PARKS AND PROTECTED AREAS.

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Economic Framework Project

In 1998 the Federal Provincial Parks Council called for the development of a common framework for measuring the economic value of protected areas. The purpose of the framework was to help FPPC members speak with one voice when talking about the economic benefits of protected areas within their jurisdictions. It was proposed that the framework should include not only traditional economic impact measurement (e.g., tourism spending, spending on capital development), but also direct user benefits (e.g., consumer surplus, existence benefits) and societal benefits (e.g., benefits from biodiversity, water production, scientific and educational benefits).

Because knowledge and measurement techniques are not equally developed in each of these areas, it was proposed that the work of developing a framework be done in three separate phases, which could be pursued concurrently or sequentially as resources allowed. The three phases are:

1. A user-friendly computerized model for estimating economic impact at the provincial level.
2. A handbook of user benefits showing how the FPPC members could undertake such studies in their own jurisdictions.
3. A series of up to 10 exploratory pilot studies undertaken with the help of academics, to establish a body of case studies on societal benefits

The work was carried out by a project task force, made up of representatives from Ontario Parks, BC Parks, Quebec Parks, NWT Parks and Parks Saskatchewan, and chaired by Dick Stanley, Director, Strategic Research and Analysis, Department of Canadian Heritage (as representative of Parks Canada). The publications in this series are the results of the work of this task force.

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- 315-e Conservation of Ecological Areas: The Economic Bottom Line
- 315-f La Conservation des aires écologiques: les résultats économiques
- 251-e Benefits of Protected Areas
- 251-f Les avantages des aires protégées
- 510-e Economic Benefits of Protected Areas: Guide for Estimating Personal Benefits
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Economic Framework Project Report 251-e

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**BENEFITS OF
PARKS AND
PROTECTED AREAS**

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BENEFITS OF PARKS AND PROTECTED AREAS

1. INTRODUCTION

In 1996, a socio-economic benefits framework for protected areas was developed for Parks Canada, Department of Canadian Heritage. This framework was proposed in response to an inadequately formulated one described by the IUCN's (World Conservation Union) Commission for National Parks and Protected Areas. That benefits framework has been applied now in Canada in several research instances and has been improved, refined and made clearer. This report presents these further specifications and clarifications of that earlier framework.

Many managers, planners and administrators of protected areas worldwide believe that in order for protected areas to be accorded their "proper" place in regional, national and international economies, their benefits and impacts must be clearly documented and demonstrated. In order to establish parks and protected areas as legitimate, productive and beneficial uses of resources, a framework of benefits is a useful tool to employ.

Natural resource economists, particularly in North America, have been working on the quantification of benefits from parks for several decades. Parks Canada is considered at the forefront in the consideration and analysis of economic values associated with parks and protected areas. The organization has a long history of socio-economic research and analysis related to national parks and has been a leading force in the development of economic impact assessments of national park facilities and services. By encouraging activities on socio-economic research, Parks Canada has had the effect of nurturing economic thought on the subject.

This paper, prepared for the Department of Canadian Heritage, provides a description of the comprehensive socio-economic benefits framework for parks and protected areas. Examples of valuations which have derived values within the benefits categories are also provided. It starts, however, with a short description of the types of benefits produced by parks and protected areas.

1.1 TYPES OF SOCIO-ECONOMIC BENEFITS

There is an almost unending number of ways to express the benefits associated with parks and protected areas. In general, two overall approaches appear to predominate: those which attempt to show the economic/commercial linkages (economic impacts) of parks and protected areas to the communities and regions in which they are located; and, secondly, those which dwell more on the amorphous attributes of such areas through their contributions to quality of life, personal health and fitness, personal improvement, the appreciation of natural beauty, and, of course, ecological integrity and ecosystem services. Economic analysis has predictably concentrated on the former types of benefits.

There are many ways of portraying the benefits of parks and protected areas: economic impacts of visitor spending, personal satisfactions from experiences, personal improvement through readings, off-site physical benefits of clean water, and many others. These benefits are sometimes classified in many different ways: e.g. monetary/non-monetary, direct/indirect, consumptive/non-consumptive, quantified/unquantified, and others. Some studies concentrate on detailed economic impact analysis; others are concerned with the value and distribution of costs and benefits; while still others describe "total economic value."

Although there are many types of economic analysis and many different ways of using economic information, one of the areas where insufficient attention has been paid is the orderly and full elaboration of benefits derived from parks and protected areas, and, in particular, how to account for them. Many a weighty tome has been published on the benefits of parks, but the park manager is inclined, understandably, to find these perplexing and confusing. Managers are frequently left with the feeling that **not all** benefits of his/her park have actually been identified, described or monetized. Further, they believe there is no easy way of knowing when the total economic value of their park or protected area has been quantified in any manner to which they can relate or understand. An analytical framework is needed where **all** values and benefits can be accounted for - even the "fuzzy-good feeling" benefits and even if they cannot now all be put in monetary terms.

The references section at the end of the report provides a list of some of the studies/reports which are oriented towards the economic evaluation of parks and protected areas. This list does not reflect by any means the full extent of work that has been conducted in this field. It is clear from the literature, however, that there is a lack of unanimity on how to classify and categorize the benefits derived from parks and protected areas. There is frequently agreement on the types of benefits, but a classification system or typology has eluded researchers so far.

1.2 WHY A FRAMEWORK?

There are many issues and concerns about socio-economic analysis which serve to emphasize the need for a commonly agreed upon framework for assessing the benefits derived from parks and protected areas. One of these is clear from the preceding section which outlines the variety of benefits and values commonly associated with parks and protected areas but the absence of a systematic reference. In addition to this, confusion about economic analysis related to park benefits arises from common errors and a variety of other reasons:

- C much of the quantitative economic analysis has focused on economic impacts, and economic impacts are frequently and erroneously thought to be the same as economic benefits;

- C the perspective of assessment and valuation gets confused so that serious questions of what constitutes a “benefit” and what is a “cost” arise;
- C components included in assessments are inconsistent - e.g. quantitative/non-quantitative, use/non-use, direct/indirect, monetary/non-monetary, consumptive/non-consumptive - and how they are all related is unclear or poorly understood and specified;
- C frequently the notion of “net” benefits is used - what is “gross” and net of what?
- C specification of the subject areas (products, experiences, goods, services, etc.) covered by the assessment is often unclear: frequently they are too broad or undefined;
- C some assessments describe “benefits” others “uses” - are they the same?
- C unknowingly inappropriate methods are applied to obtain benefit estimates.

With these points of frequent confusion and the myriad values reported in the literature, there is obvious potential for muddled thinking and generation of questionable results. As noted earlier, a park manager has no way of knowing when total benefits are being assessed or what sub-set of benefits are being assessed - unless (s)he has some experience with this type of analysis or possesses some understanding of the issues involved. A consistent and easily applied framework for economic assessments is therefore necessary for both analysts and managers.

This report describes an economic assessment framework which will allow researchers, managers, policy analysts and others to view the socio-economic benefits associated with parks and protected areas within a consistent, comparable and comprehensive format. The paper is not an in-depth guidebook on how to estimate or determine these values, but rather provides an overview of the classes and types of benefits which parks and protected areas produce. Further reference works in specific benefit categories which are based on the principles contained in this paper will be required.

2. BENEFITS FRAMEWORK

The issues and concerns identified in the myriad reports on the benefits of parks and protected areas indicate the urgent need for a comprehensive economic benefits framework within which the benefits derived from protected areas can be assessed. In response to this need, a comprehensive framework has been developed here for this specialized study of economic benefits. The framework is summarized in Figure 1 on the following page. While the framework presented here is generalized, it should be possible to fit any benefit derived from a protected area into one of its categories.

2.1 OVERVIEW

The framework of benefits is based upon two fundamental principles. First, there are three categories of beneficiaries of the goods, services, products and experiences derived from parks and protected areas. Secondly, the value of the benefits within these benefit categories changes with different perspectives of valuation (or different “account registers”). This section introduces each of these fundamental aspects of the framework.

Benefits - The framework should identify all benefits generated by the park or protected area. The three categories developed cover as many different types of benefits as possible, and, it is assumed that all benefits can be fitted into the categories described. Determining into which category any benefit should fall is dependent upon an understanding of who to ask about the benefit received.

The “personal” category identifies all benefits accruing to stakeholders, whether they are direct users, indirect users or non-users of the particular area being assessed. This category includes benefits received by those who actually visited or used the site (direct users), those who have enjoyed the asset through some indirect means (e.g. photographs, movies, books, etc.), and those who have a knowledge of and/or interest in the area but have not used it in any way (non-users). Non-users also include the benefits received by persons who may not know about the specific area but receive benefits from the knowledge that these types of areas exist as a matter of public policy. Certain expenditures (e.g. entry fees) and consumer surplus values are the main sources of value in this category.

FIGURE 1
GENERALIZED FRAMEWORK OF THE
TOTAL BENEFITS OF PROTECTED AREAS

Benefit Category:		
PERSONAL	COMMERCIAL	SOCIETAL
Definition:		
benefits accruing to stakeholders (users and non-users)	economic impacts derived from the redistribution of commerce from one area to another	benefits with “public good” characteristics and tending to be societal in scope
Benefit Components:		
Use Values - direct use - indirect use	Impacts from spending by stakeholders and by location management for development and operations, from sources outside the area of assessment (as measured by increases in GDP, labour income, employment and tax revenue)	Ecological Functions: primary production, sequestering carbon dioxide, soil formation, herbivory, carnivory, oxygen production, population moderation, nutrient transport, moderation of macro- & microclimate, decomposition, maintenance of genetic diversity, and others
Non-Use Values - option value - existence value - bequest value		Resource integrity: maintenance of existing benefits; ameliorate effects of human changes
		Health effects - physical, mental, spiritual
		Worker productivity
		Educational benefits
		Scientific benefits
		International responsibilities/agreements: NAWMP, CBD, RAMSAR, CITES, MAB, etc.
		Business location decisions (quality of life/business), community cohesion

The “commercial” category of benefits exists when valuing the benefits of a park from the perspective of a defined area (e.g. local community). The economic impacts of spending within the area from sources outside the area (by visitors and/or on development/operations) produced as a result of the protected area can be considered a net benefit for that community or area. It represents income and employment that would not otherwise have existed without the spending of agencies and people from outside the defined area.

The “societal” category is at once the most comprehensive, and most nebulous. Societal (or public) benefits are all those benefits which accrue to society as a whole (over and above those

to stakeholders and businesses). While there is inevitably some overlap with the personal category of benefits, these benefits to society go beyond the personal: the country, region, or area is seen to be a better place because of the benefits derived from the protected area. They range from the extremely practical, such as ecological functions/services upon which our survival depends, to more subjective benefits such as increases in worker productivity. The benefits are nonetheless real and many are measurable.

Account Registers - the perspective adopted for any analysis is critical to understanding the results of the analysis. In the generalized framework there are fundamentally two types of perspectives for the valuation of benefits: 1) society in general (mankind), where borders are irrelevant; and 2) defined areas, where residency is an important consideration. These two types of account registers reflect situations where in one case the source of funds is not a factor - where benefits accrue to mankind generally; and one in which benefits are determined in relation to some defined area or areas (e.g. country, province, region, local area), making the source of funds a key determinant of the distribution of benefits and costs. The second type is more commonly applied especially by parks management agencies.

2.2 FRAMEWORK DESCRIPTION

This section provides a more in-depth description of the framework and its constituent parts.

2.2.1 Benefits

Personal Benefits

Another possible title for this section in keeping with the other terms is “individual stakeholder” benefits. Stakeholders are defined as anyone with an interest in the protected area. There are two component parts to personal or stakeholder benefits: use values and non-use values.

Use Values

Use values are those derived from actual use of the site, park, area or function being assessed. Such values are comprised of the amount paid as a resource rent by the user/visitor - such as an entrance fee, camping fee, day-use fee, or other such amount; plus any extra-market benefit received - such as consumer surplus. The amount actually paid to use a river, park, or other asset being valued can be determined through questionnaires, and the amount (or existence) of extra-market benefits can also be determined through questionnaire surveys using various contingent valuation methodologies (CVM) or through other methodologies.

Most studies measure the expenditure component of direct use values and do not attempt to quantify the extra-market benefits (consumer surplus). Studies quantifying these complete values will grow as recognition of these values grows, and as methodologies become more universally accepted and understood.

Indirect use values are benefits enjoyed by individuals who may have visited/used the asset being assessed, but whose current benefits are derived from off-site activities or deliberations. The benefits are related to the protected area, but no direct use is being made of it in the attaining of these benefits. Such benefits can be obtained from the asset through activities such as reading, watching movies, enjoying art, etc. about a specific protected area. Household surveys can yield measures of these benefits by gathering information on expenditures and extra-market benefits from indirect “users”.

Non-Use Values

Non-use values, sometimes referred to as “preservation” or “passive use” values, are those gained by persons who are aware of the area but may not ever actually use or visit the area. There are three components to these values: option, existence and bequest values.

Individuals are known to gain personal benefits from the knowledge that the specific protected area exists and is available for possible future use. Option value is, in some respects, similar to an insurance policy - the amount an individual is willing to pay in order to ensure a future option. This option for future use (option value) has been shown to be substantial in some studies. Measures of this value can be obtained through household or population surveys using CVM techniques.

Existence value is another component of non-use values. This value is derived from the knowledge that a resource (protected area) has been preserved in perpetuity, even if no recreational or other personal use is contemplated. The very existence of a protected area creates benefits for certain people. These values are estimated through population or household surveys and employing CVM approaches.

Another source of existence benefits, not necessarily related directly to the specific protected area being assessed, is the personal benefit obtained from knowing that such areas are being protected or managed in a sustainable manner, as a matter of public policy. The knowledge that national parks exist, for example, is valuable to some people without their having to know the details about each park.

Bequest value is the third generally accepted component of non-use values. Bequest value is derived from the knowledge that future generations will have the opportunity to use, enjoy and appreciate the protected area. Time is the critical dimension of this source of value. These values too are derived through surveys of the general population using CVM or other techniques.

It is worth noting that researchers have questioned whether or not these three components of non-use benefits can be estimated individually. There is some thought that these three components should be assessed together. Since it is thought respondents cannot adequately distinguish between the three components. Continued research will help clarify this issue.

Personal benefits derived from use or non-use of a protected area reflect the value placed on such areas for a wide variety of reasons. The research literature largely assumes that those indicating a benefit and/or consumer surplus have included all sources of personal benefit or possible reasons in their valuation. Unfortunately, this may not always be a valid assumption. As an example, it is not clear whether health improvements from physical recreational activity are incorporated into respondents' assessment of value from hiking in a national park, or the increase in productivity this may result in at their place of work, or the increased knowledge gained by the experience leading to other beneficial outcomes. These tend to be aspects of the experience that respondents may unknowingly omit to factor into their assessment of the personal enjoyment from the protected area. These benefits accrue to the society in which these respondents live. When these values are not included within personal valuations, they should be incorporated into a broader valuation category. As a result, they have been classified as societal benefits rather than personal, for the purposes of this framework. However, it is important to recognize that some overlapping of values may occur, especially between personal and societal benefit categories.

A final point worth emphasizing is that distributional issues arise in the accounting for personal benefits. The account registers (perspective of assessment) are important from the point of view of determining what benefits remain within the area of assessment. When assessing a protected area from a province's perspective, for example, any consumer surplus (benefits over

and above what was paid for) derived by non-provincial residents from the protected area must be treated as exports. They are personal benefits attributable to the protected area but not retained in the province. The world is better off, but the benefits to the province cannot include this portion of personal benefits obtained by non-residents because they were not retained in the province. As another example, if the perspective of assessment was Canada, then the personal benefits (consumer surplus or non-market benefits) derived by non-Canadians from our protected areas would be treated as non-retained benefits within Canada and not included in any calculations of overall benefits to Canada from its protected areas. Naturally, all consumer surplus obtained by Canadians would be included in the calculations. Note, however, that Canada benefits in other ways from the foreign visitors: most notably commercially, as explained next.

For detailed information on the methods used for the estimation of personal benefits please refer to The Economic Benefits of Protected Areas: A Guide for Estimating Personal Benefits, prepared for the Federal-Provincial Parks Council by *The Outspan Group*, 1999.

Commercial Benefits

While the literature frequently refers to this type of benefit as “secondary impacts”, in terms of the continuum of categories adopted here, a more apt term is “commercial” benefits.

As per the definition in the chart, this benefit category represents the value of benefits derived from the commercial activity and its various impacts on income and employment from one area to another. The benefits are the value added which is retained within the area associated with the spending by persons and/or organizations from outside the area. For example if the benefits of a protected area in Canada are being assessed, the value added associated with the spending by Canadians would not be included (with the exception of some caveats) while attributable spending by Americans, Europeans, etc. would be included in this benefit category. The spending by residents of other countries represents a shift in commercial activity from those countries to Canada. As such the increased business income and its associated (direct, indirect and induced) impacts from the expenditures of these visitors can be considered a net benefit. Similarly, if an organization, such as the World Wildlife Fund, spends funds on Canadian protected areas, this too can be considered a net gain, assuming the source of the funds was from outside Canada. Source of funds, then, is the key criterion to apply to this benefit estimation procedure.

Again it is also important to distinguish between economic benefits and economic impacts in this analysis. The economic impacts of all spending are measurable and real within the selected defined area (country, province, local area) irrespective of where the funds originated. However, not all impacts can be considered benefits. Benefits arise when the impacts reflect an injection into the defined area economy from outside sources and are attributable to the protected area. Such economic impacts, associated with spending from sources outside the defined area, can legitimately be counted as benefits within the area.

Most often the measures used to show impacts are: gross domestic product (GDP), labour income, employment (person-years) and tax revenue. In this way, benefits derived by private sector businesses and tax revenues received by the public sector from this increased business can be determined¹.

For detailed information on the methods used to estimate commercial benefits (applicable economic impacts) please refer to: Department of Canadian Heritage, Provincial Economic

¹ See Appendix 1 for a more complete description of the differences between economic benefits and economic impacts.

Societal Benefits

In keeping with the terms describing framework categories, this category could also be termed “public good benefits.”

Societal benefits are considered those benefits which go beyond those obtained by individuals or businesses and are societal in breadth or contribute to the overall public good. As mentioned in the personal benefits section (above), there may be some overlap between these benefits and the personal benefits. Clear distinctions between categories are difficult to enunciate, in some cases. In addition, although some benefits may have a personal component, there may also be societal benefits. For example, if park users are healthier individuals, this can have significant implications for public medical costs related to a wide range of ailments. The relationship between cause and effect may not be direct.

Benefit components are broad and varied and include the following:

- Health Benefits - physical health, mental aspects, spiritual health;
- Resource Integrity - protected areas can maintain current levels of personal and commercial benefits, and reduce or mitigate the cumulative effects of change by humans over time;
- Worker Productivity - increased productivity from content, healthy and knowledgeable workers;
- Business Locations - economic benefits may accrue to an area because of the nature of the resource base in the area: businesses increasingly are being located in areas where their employees can enjoy natural amenities (and be productive workers);
- Educational benefits - the availability of the natural resources, protected from irreversible change and/or destruction, for educational purposes; also better educated/knowledgeable population;
- Scientific benefits - the availability of the natural resources and systems, protected from irreversible change and/or destruction, for scientific and research purposes, including biotechnology and technological development;
- Ecological functions - those natural ecosystem goods and services necessary for man’s survival are many: primary production, soil formation, herbivory, carnivory, oxygen production, sequestering carbon dioxide, etc²;
- Legal agreements - the provinces and Canada, like many countries, has agreed to participate in many national and international agreements related to the environment and protected areas, which individually and cumulatively generate benefits to mankind (including Canadians).

² A starting point for consideration of these functions are the twenty-one ecological functions listed in Chapter 4 of Canada’s Biodiversity: The Variety of Life, Its Status, Economic Benefits, Conservation Costs and Unmet Needs, Canadian Museum of Nature, 1995.

Assessing the actual value of the benefits of many of these components may be difficult. That they are beneficial is not in doubt, and that they are mostly benefits which accrue to all of society is clear. However, this category of benefits is one which would benefit from further consideration, discussion and research by those concerned with deriving the benefits of protected areas.

2.2.2 Account Registers

Too often overlooked or misunderstood, account registers provide the key to the success of any analysis of benefits. Account registers describe the perspective of the assessment and are required to allocate benefits and costs; exports and imports.

The account register adopted for any analysis of benefits sets the boundaries for the analysis; it defines the area in which benefits are being assessed. As such, it clearly delineates whose benefits are included within the register and whose are excluded from the register. The account register can be in several forms - benefits to a local area, a region, a province, to the nation or to society in general (global).

It is important to understand the perspective of valuation (account register) adopted in all benefits analyses. If it is not clear whose benefits are being included, then the results of the analysis cannot be clear. It has been suggested that one of the reasons some policies conceived at the national level are not effective or sometimes have seemingly perverse effects at the local level, is that the local account register was never considered. Using different account registers in different analyses lets the analyst appreciate the changes in distributions of benefits from each perspective - they will not be the same. It may be very useful for any study of parks and protected areas to present a series of results for a series of account registers in its assessment of the same protected area.

2.3 RECENT STUDIES

There are several recent studies and reports which have addressed the framework issue to varying degrees or attempted to place values on the benefits of parks and protected areas within the categories described here. A brief description of these reports, with emphasis on Canadian contributions, is provided here.

1. Economic Benefits of British Columbia Parks by Coopers and Lybrand Consulting for British Columbia Ministry of Environment, Lands and Parks. 1995

After an overview of the BC parks system, this report describes the overall benefits of parks and ecological reserves, and examines economic impacts and non-market economic values. While no explicit framework was described, the overall benefits fit within three broad groups: recreation benefits, conservation benefits and cultural heritage preservation. Economic impacts are reported in detail while the non-market economic values are reported in a more summarized form. Economic impact estimates were based on visitor spending data and government spending records while the non-market values were derived from secondary sources. The report is a good example of economic analysis related to parks and protected areas.

2. Benefits and Economic Impacts Associated with the Canadian Heritage River System, by The Outspan Group, for the Canadian Heritage Rivers Board. 1997

This report was the first application of the full benefits framework to recreational resources in Canada. The report describes the benefits framework, estimates the economic impacts of the Canadian Heritage River System (CHRS), estimates the economic benefits of the CHRS

and draws some conclusions on the values estimated. The report provides a good example of an assessment of benefits derived from protected areas (as illustrated by CHRS rivers) from a national perspective or account register.

3. Economic Valuation of Wetlands, a Guide for Policy Makers and Planners, by E.B. Barbier, M. Acreman and D. Knowler, for RAMSAR Convention Bureau, IUCN-The World Conservation Union, 1997.

This report prepared for the IUCN is a lengthy volume which describes wetlands and their management problems, the rationale for developing values for wetlands, a staged approach for valuation, a series of case studies and some guidelines and recommendations. It uses a "total economic value" classification system somewhat different from the one described in this report. It has classified value into four categories: direct use value, indirect use value, option and quasi-option value, and existence value. The first three categories are classed as "use values" and the latter category is classed as "non-use values." The report does not provide detailed methods of analysis but does provide guidelines for the preparation of this type of valuation study. This is an interesting report which managers of protected areas should find useful.

4. Benefits of Protected Areas: The Gros Morne National Park Case Study Final Report by W. Locke and A. M. Lintner, for Parks Canada. 1997

Prepared by staff of the Department of Economics, Memorial University of Newfoundland, this report provides an analysis of the benefits derived from Gros Morne National Park based on the benefits framework described in this report. The full range of benefits attributable to the park are described in this study with greatest emphasis on further specifying and describing the societal benefits. This report is a good example of an application of the benefits framework and provides an expanded societal category as well as useful information on the categories of benefits and suggested means of measurement.

5. Economic Benefits of Provincial Parks in Ontario: A Case Study Approach, by The Outspan Group, for Ontario Parks. 1998

There are several analyses presented in this report. After a description of the Ontario Provincial Parks classification and the economic benefits framework, the report presents the results of analyses undertaken on three provincial parks - Quetico, Lake Superior and Mattawa River. Two account registers were used for each analysis: local area and province. The full range of benefits are described and quantified to the extent possible. This report is a good example of how the benefits change with different account registers, and is the best example of an application of the benefits framework for parks and protected areas.

6. Linking Protected Areas to the Economy, Guidelines for Assessing the Impact on the Economy from Protected Areas by Economist@Large & Associates for the IUCN World Commission on Protected Areas, (Final Draft). 1999

This lengthy report covers a great many of the financial links between protected areas and the economy. Much of the report provides useful and interesting descriptions of "worked examples" and a "survey of literature." Examples and the literature cited come from around the world. Early chapters concentrate on the economy and protected areas, economic impacts and a "valuation framework." The impacts of protected areas actually valued include: tourism/recreation; natural services; water production; mitigation of natural disasters; fish spawning and breeding; food and fibre hunting and gathering, animal sales; and financial costs of protected area administration. The report provides some useful

information and approaches to financial assessment of protected area benefits but does not examine non-market (non-financial) benefits.

7. Economic Values of Protected Areas, Guidelines for Protected Area Managers by Task Force on Economic Benefits of Protected Areas of the World Commission on Protected Areas of IUCN in collaboration with the Economics Service Unit of IUCN, for the World Commission on Protected Areas. A. Phillips, Editor. 1998

Prepared as a reference and resource document for managers of protected areas, this report is divided into two parts. Part 1 provides background information about economic valuation techniques, examples of the various values protected areas produce and an explanation of how the information can be used in financial and management decision-making processes. Part 2 provides 16 examples or case studies from around the world highlighting the process or steps involved in valuations. The benefits framework adopted for this report is the same as that used in the IUCN Wetlands report (above). This report should be of use to managers of protected areas and help to understand the types of economic analysis possible in valuations of protected areas.

8. Conservation of Ecological Areas: The Economic Bottom Line, Dick Stanley, Strategic Planning and Policy Coordination, Department of Canadian Heritage, 1997

This is a short paper which discusses the benefits produced by protected areas and the many different ways of classifying them. The central thesis of the paper is that parks produce benefits of all types, many of which can be stated in economic terms. The paper discusses the all too often misuse of benefits data and lack of clarity in detailing which benefits can/should be included and which should not in any analysis.

9. Estimating Existence Values for Four Proposed Park Sites in the Northwest Territories: Bluenose Lake and Melville Hills, East Arm of Great Slave Lake, North Baffin and Bylot Islands, Wager Bay, for Parks Canada by Dr. Kimberly Rollins, Caroline Gunning-Trant and Audrey Lyke. 1998

This report was undertaken for Parks Canada to help understand how the Canadian public valued the creation of four new national parks in Canada's north. The study was a technical economic one which developed estimates of the existence value (personal non-use) associated with these parks. The report presents results of the research in a technical manner but is one of the most recent in Canada which estimates existence values. It is an excellent example of this type of research.

There are many reports which could have been identified and included in the list presented here. Some of the others appear in the references, although these tend to be Canadian contributions. However, the literature is growing and there are many examples that can be read.

3. CONCLUSION

This report has described a comprehensive framework for the assessment of the socio-economic benefits derived from parks and protected areas. It provides a reasonable and realistic basis for the quantifying and describing the benefits which such areas produce.

There are many strengths to the benefits framework:

- 【 there are three easily understood distinct primary bases of benefit derivation - those accruing to individuals, to businesses and to the public good;
- 【 the benefits derived in each category are additive and not duplicative;
- 【 account registers accommodate varied perspectives of valuation;
- 【 economic impacts are integrated into an economic benefits framework;
- 【 the framework is sufficiently generic as to be equally applicable to parks and protected areas as well as other resource uses;
- 【 the extent to which total values of protected areas are being assessed can be gauged; and
- 【 priorities for specific areas of economic valuation research can be established by observing areas where no, little or poor valuation information exists;
- 【 policy options can be assessed in terms of their effect upon the distribution of benefits between the three categories and strategies can be better formulated to achieve changes in distributions for targeted beneficiaries.

While the framework itself is reasonably easy to understand, the economic analyses required to estimate the value of the benefits are not so straightforward. This would be the case no matter how complex a framework was adopted. However, the role of the framework should be to allow, foster and enhance understanding of the beneficial aspects of parks and protected areas. It is believed that this framework helps economists and non-economists alike to understand the full range of benefits produced by parks and protected areas and should help them understand where the results of specific studies fit within this continuum.

In summary, the economic assessment framework described in this chapter provides a comprehensive and all-inclusive approach to the economic assessment of protected areas. It incorporates a broad spectrum of benefits, incorporating three categories of beneficiaries and any number of accounting stances.

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BENEFITS
OF
PARKS AND
PROTECTED AREAS

APPENDIX 1
ECONOMIC BENEFITS AND ECONOMIC IMPACTS

Economic Benefits and Economic Impacts

Economic impacts and economic benefits are frequently treated as being the same. For example, it is frequently thought that the impacts from spending by tourists represent a benefit to an area. This may or may not be true, and usually depends upon the perspective (account register) adopted for the economic assessment.

Economic impact analysis is an analytical tool used by economists to determine (or estimate) the total and cumulative effects of an injection of funds into an area's economy. Interindustry relationships and employment characteristics within the area will have a bearing on the impacts felt within the area. Similarly, the extent to which the area depends on goods and services from other areas (imports) will have an effect on the ultimate effects of any spending in the area. These effects are real and measurable by different techniques. In Canada, a standard and useful tool is the input-output model (I-O model) of the Canadian economy, as maintained by Statistics Canada. Impacts of spending can be accurately measured within and between each of the provinces using this model. Essentially, the model generates specific multipliers that can be applied to an injection of funds to determine the total impacts. Total impacts reflect the cumulative respending associated with an initial expenditure.

When a public agency spends money, there are impacts associated with that spending, creating beneficial economic activity in the local economy which would not have been created without the public agency spending. But all expenditures, no matter what they are for or who makes them, have this (or a similar) impact. Spending by the public agency, therefore, means that impacts in one area will be offset by a 'lack of impact' in other areas. The net effect can be considered neutral; it really reflects a redistribution of impacts.

Visitor spending on tourist services also creates economic impacts. These impacts occur whether the visitors are from the local area or some distance away. However, the spending by tourists represents spending that was also not spent elsewhere, so that one area's gain is another's loss. Once again, the overall effect is a redistribution of impacts.

Notwithstanding the foregoing, the impacts associated with spending by public agencies and tourists visiting the park can be considered benefits when they originate from outside the area being assessed. For example, if an analyst is assessing the benefits to Canada from a park, the economic impacts associated with attributable spending by foreign visitors can indeed be treated as a benefit to Canada. Similarly, impacts derived from spending by foreign public agencies or NGOs on the park can be counted as a benefit to Canada, when those funds come from outside Canada.

If the assessment is being undertaken from the perspective of a province, e.g. Ontario, the same arguments apply. For example, economic impacts associated with spending by non-Ontario resident visitors can be viewed as a benefit to Ontario. In this way, the spending of visitors from other provinces and foreigners can be used to calculate impacts within Ontario. Economic impacts related to spending of Ontario residents should not be included, as this reflects a redistribution within Ontario. In addition, spending by the federal government on the park in Ontario can be considered a benefit, (when adjusted to remove any contributions originating in Ontario), since the funds came from outside the provincial coffers.

The argument can be carried in a similar fashion down to the local level. Key considerations are residency of visitors and sources of funding.

In terms of the measure of economic impact, the appropriate indicator is **value added**. This is measured in the Canadian I-O model as gross domestic product at factor cost (GDP). This amount represents the value retained within the account register. Other complementary measures frequently used to describe the impacts include labour income and person-years of employment.