

THE SUSTAINABILITY OF COMMERCIAL TOUR OPERATIONS IN PROTECTED NATURAL AREAS: DEFINING CATEGORIES OF ENVIRONMENTAL SUPPLY

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Abstract

There is a need in federally protected areas, such as national parks, to investigate the connection between management actions and responsible and sustainable tourism. Environmental supply, as a subset of ecosystem services, is a recent concept that seeks to contribute positively to park management actions about commercial visitor activities and environmental conservation in protected national areas. This can be accomplished by linking commercial visitor demand with understanding of tour operator's views about environmental supply. This study targets commercial tour operator's categorization of environmental supply in the Canadian Rocky Mountain national parks of Banff and Jasper. As a concept, environmental supply includes natural features, physical attributes, management initiatives and/or governance policies that influence environmental conservation. Environmental supply, therefore, will include the ecosystems and services of the park destination, visitor education and interpretive programs, zoning and access, environmental impact assessment (EIA) procedures, policies and guidelines, and any other characteristics and initiatives that impact the conservation and/or preservation of nature at a visitor-centered site. How commercial tour operators respond to and manage these for environmental protection in a conservation environment will determine tourism sustainability at the destination. This research presents the results of interviews and a pilot survey that provided information to create initial categories of quality success of environmental supply as defined by commercial tour operators in Banff and Jasper National Parks in the Rocky Mountains of Canada, where we provided a methodology to monitor changes over time by using categories of this research to define quality success indicators of environmental supply that are also parameters of sustainability in high use national parks.

Keywords: Environmental supply. Commercial tour operators. Sustainability. Indicators.

A SUSTENTABILIDADE DE OPERADORES TURÍSTICOS COMERCIAIS EM ÁREAS NATURAIS PROTEGIDAS: DEFININDO CATEGORIAS DE OFERTA AMBIENTAL

Resumo

Em unidades de conservação federais, como os parques nacionais, há uma necessidade de se investigar a ligação entre as ações de gestão e turismo responsável e sustentável. A Oferta Ambiental, como um subconjunto dos serviços dos ecossistemas, é um conceito recente que visa contribuir positivamente para a gestão em parques, como as atividades do comerciais dos visitantes e a conservação ambiental em áreas nacionais protegidas. Isto pode ser conseguido ligando demanda comercial visitante com a compreensão de pontos de vista das operações turísticas sobre a oferta ambiental. Este estudo tem como alvo a categorização do operador turístico comercial sobre a oferta ambiental nos parques nacionais das Montanhas Rochosas canadenses de Banff e Jasper. Como conceito, a oferta ambiental inclui recursos naturais, atributos físicos, as iniciativas de gestão e / ou políticas de governança que influenciam a conservação ambiental. Portanto, ele incluirá os ecossistemas e os serviços do parque de destino, educação visitante e programas interpretativos, zoneamento e acesso, procedimentos de avaliação de impacto ambiental (EIA), políticas e diretrizes, e quaisquer outras características e ações que impactam a conservação e / ou preservação da natureza em um local centrado no visitante. Como os operadores turísticos comerciais respondem e gerem a isto, visando a proteção e a conservação ambiental condiciona a sustentabilidade do turismo no destino. São apresentados aqui os resultados de entrevistas e uma pesquisa piloto que forneceram informações para se criar categorias iniciais para se qualificar o sucesso da oferta ambiental, no contexto empírico assinalado, permitindo-nos, ao final, gerar uma metodologia para monitorar as mudanças ao longo do tempo usando categorias da pesquisa para definir indicadores de sucesso qualidade da oferta ambiental que também são parâmetros de sustentabilidade em alta utilização parques nacionais.

Palavras-chave: Fornecimento ambiental. Operadores turísticos comerciais. Sustentabilidade. Indicadores.



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SOSTENIBILIDAD DE LAS TOUOPERADORES COMERCIALES EN ÁREAS NATURALES PROTEGIDAS: DEFINICIÓN DE CATEGORÍAS DE OFERTA AMBIENTAL

Resumen

En las áreas protegidas por el gobierno federal, tales como parques nacionales, hay una necesidad para investigar la conexión entre las acciones de gestión y el turismo responsable y sostenible. La oferta ambiental, como un subconjunto de servicios de los ecosistemas, es un concepto reciente que busca contribuir positivamente la gestión de las actividades comerciales de los visitantes y a la conservación del medio ambiente en las áreas protegidas nacionales. Esto se puede lograr mediante la vinculación de la demanda comercial de visitantes con la comprensión de puntos de vista de los operadores turísticos sobre la oferta ambiental. Este estudio tiene como objeto albo la categorización del operador comercial de la oferta ambiental en los Parques Nacionales de las Montañas Rocosas canadienses de Banff y Jasper. Como concepto, la oferta ambiental incluye características naturales, atributos físicos, Iniciativas de gestión y / o de gobierno políticas, que influencia conservación del medio ambiente. Por lo tanto, en el concepto se incluirán los ecosistemas y servicios del destino parque, educación de los visitantes y de los programas de interpretación, la zonificación y el acceso, evaluación de impacto ambiental (EIA), las políticas y directrices, y cualesquiera otras características y/o acciones que impactan en la conservación y / o la preservación de la naturaleza en el sitio indicado. La forma por la cual los operadores turísticos comerciales responden y gestionan a esto visando a la protección y conservación ambiental condiciona la sostenibilidad del turismo en el destino. Se presenta en esta investigación los resultados de las entrevistas y de una encuesta piloto que proporcionarían informaciones para crear categorías iniciales para calificar el éxito de la oferta ambiental definida por los operadores turísticos comerciales en el contexto empírico indicado, de lo cual, al final, se pudo proporcionar una metodología para monitorear cambios en el tiempo mediante el uso de las categorías de esta investigación para definir los indicadores de éxito de la oferta ambiental.

Palabras clave: Oferta ambiental. Operadores de turismo comerciales. Sostenibilidad. Indicadores.

1 INTRODUCTION

“Over time, the role of tourism in natural areas has been upgraded and refocused to reflect ecological values and maintenance of the quality of the visitor experience. Sustainability, needed to ensure protection of the environment and quality tourism experiences must engage ecological integrity while ensuring that visitors will be informed about the importance of natural landscapes, cultural heritage, the role of conservation for society, and how a balance of these will be important for the future (McNICOL 2015a, p. 183)”.

‘Ecosystem services’ is an all encompassing topic that includes all of the functions of services provided by ecosystems. These functions of ecosystem services are a challenge in national parks where ecological values are often in direct opposition to tourism and recreational activities.

This is supported by Canadian national park mandate which states that Canada’s national parks are designed and established to protect some of Canada’s most spectacular yet fragile environments while at the same time promoting visitor accessibility and use. This paradox was ensured with proclamation of the National Parks Act in 1930.

Since then, Canadian national parks have operated with a dual mandate: Not only are national parks dedicated to the people of Canada for their benefit, education and enjoyment, but also parks are to be maintained and used so they will remain

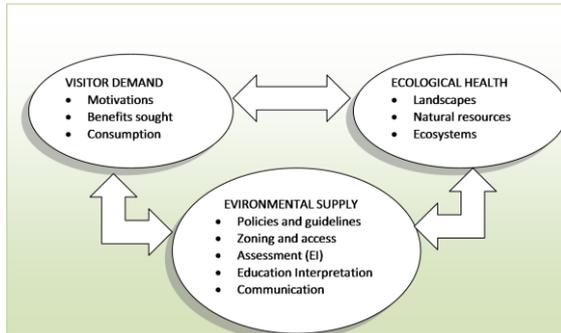
unimpaired for future generations (PARKS CANADA AGENCY 2000; PARKS CANADA 2001). After a declared emphasis in 2001 on conservation of ecosystems a change in 2009/2010 saw Banff National Park management focusing on increased visitation and recreation demand in the form of an announced two percent increase annually over a three year period (PARKS CANADA, 2010). Many new services, to meet the increased demand, are being provided by private commercial tour operations and businesses within the parks.

Environmental supply, as a recently defined concept, integrates ecological considerations with sustainable tourism initiatives. The paradigm of environmental supply provides for communication and operation by integrating the goals of sustainable tourism with the values of ecological conservation.

For example, ecosystem services include all of the natural, physical and ecological systems within a natural environment while environmental supply, which operates within this framework, integrates all aspects of visitor use to environmental management (McNICOL, 2015b).

The concept of environmental supply, in a national park, may be viewed as those initiatives that influence environmental and park protection such as visitor education, zoning and access, environmental assessment policies, ecological resiliency and assessment guidelines (EA) and any other initiatives that impact conservation and support protection of natural park landscapes from inappropriate or excessive tourism and recreational uses (Figure 1).

Figure 1: Balancing Visitor Demand with Environmental Supply.



Source: McNicol (2015a: 185).

As Hall (1998) has declared, a landscape in any tourism environment is a consumer product. This, often fragile, product relies on the sustainable management initiatives of selective supply at the destination.

A protected area, such as a national park, relies on planning and management of sustainable supply of activities and services to ensure natural resource conservation and a quality visitor experience result (MOWFORTH; MUNT, 1998; HONEY, 1999; BOYD, 2002; BRONSON; NOBLE, 2006; TISDELL; WILSON, 2012; WHITE; NOBLE, 2012).

As well, sustainability of protected park environments, with high visitation and an ever increasing diversity of tourism activities, includes recognition by national park stakeholders of the need to balance commercially hosted tourist behaviors with conservation initiatives (MANNING 2001; JAMAL; DREDGE, 2011).

In order to function credibly within a national park, commercial operators need to be aware of and understand park management directives, policies and operational procedures. If there is lack of communication, then both parties need to understand where the lack occurs in order to achieve a balance of goals and objectives that will result in sustainable tourism.

Skipping an important step of how environmental supply is interpreted by suppliers as they seek to accommodate tourist demand, suggests that researchers (and park managers) often miss a clear understanding of what needs to be measured for integration of visitor management with environmental management (McCOOL; MOISEY & NICKERSON, 2001; RYAN, 2003; TRIBE, 2008; McNICOL 2015a).

Empirically, observations from this study can be used to eventually designate quality success indicators of environmental supply that will measure

any disconnect (TORRES-DELGADO; SAARINEN, 2014). In the end, these categories can be used for longer term input into natural area conservation, by managers, in national or state parks in other countries.

1.1 State-of-the-Art

In Canadian Rocky Mountain national parks a similar process has been developed as a means to protect areas for future generations while allowing as many people as possible to enjoy the experiences and activities parks offer¹.

Parks Canada Agency launched a comprehensive program for building strong personal connections to national parks through visitor experience and education². This important shift in focus initiated a call for sound scientific information to guide decisions linked to re-investment in park facilities and programs that will promote positive visitor experience and enhance public awareness of the values and benefits of national parks. This research has evolved as one response to the call for increased scientific information about visitor experiences and environmental protection.

Key to the study is measurement of the performance of commercial tour operators' expectations for client activities and environmental experiences that national park management is able to supply. In the end, indicators which are derived from categories of environmental supply will allow environmental or park managers to work within an environment's carrying capacity and manage for dimensions of unacceptable changes. Depending on the visitor experiences supplied, carrying capacity models provide a framework and process for defining limitations and creating guidelines, policies and regulations for visitor actions and access (MANNING 2001; 2007).

Past research has defined that social changes are linked to such indicators as 'overcrowding' and biophysical indicators such as 'species losses' are typical of high use recreational and tourism landscapes. Therefore, in protected areas where diversity of human activities is a concern the management focus has traditionally been on negative consequences (BUCKLEY, 2000).

The eventual aim of this research is to switch the measurement of environmental indicators from those that focus on negative physical, environmental and natural consequences to indicators that focus on quality success factors that evaluate the sustainability

¹ This process was coined the Human Use Management Strategy (PARKS CANADA, 2000).

² Further information can be find at: <<http://www.tbs-sct.gc.ca/rpp/2010-2011/inst/cap/cap01-eng.asp>>.

of commercial tour operations use of ecosystems within a diversity of high-use national parks in different countries around the world.

Questions that can be asked are:

1. Should we expect difference for the commercial visitor experience in different national parks?
2. Will differing planning or management frameworks change tour operator's abilities to deliver their environmental experiences?
3. Will the same quality success indicators be used for measuring environmental supply in all high use national parks or will different indicators be needed for different park and policy environments?
4. Will each high use national park present similar measures of quality performance of environmental supply or will there be comparative differences?
5. In the end, will park administration and management benefit from understanding differences between performance indicators and measures of quality success linked to environmental supply for the planning and management future of these national parks?
6. What are recommendations of the research for empirical policy input and contributions toward sustainability of ecosystem services through evaluation of environmental supply?

A protected area, such as a national park, relies on sustainable actions to ensure resource conservation and a quality visitor experience result (MOWFORTH; MUNT 1998; HONEY 1999; BOYD 2002; BRONSON; NOBLE 2006; TISDELL; WILSON 2012; WHITE; NOBLE, 2012).

The impacts of tourism activities in national parks, however, remain a threat to ecological integrity where visitor management objectives focus on commercial tourism ventures and development.

Despite the best science, policies, and legislative tools at its disposal, national parks such as Banff and Jasper, in the Canadian Rockies, continue to struggle with the consistent application of a balanced management approach between environmental protection and human uses (SWINNERTON 2002 apud PAVELKA; ROLLINS 2009, p. 274).

Being able to understand a positive visitor experience is one key characteristic of sustainable tourism. Being able to link a positive visitor experience to environmental consequences is important to the environmental management of national park conservation (BRONSON; NOBEL, 2006; TISDELL; WILSON, 2012).

2 RESEARCH DESIGN AND METHODS

This research project has been designed and implemented in two stages for discussion in this paper. A third and final stage was implemented during the summers of 2015/16 to be presented as further and future results. The stages are outlined below:

2.1 Stage 1

Noting the similarities of these national parks, an exploratory study was undertaken to understand commercial tour operator's perceptions of the concept of environmental supply in Banff and Jasper national parks.

This stage included the implementation of 16 exploratory, yet formal, field interviews. Key to this exploratory work was clarification of the performance of commercial tour operators' for activities and environmental experiences that national park management is able to supply.

The initial field data gathered for this stage of the research project consisted of 16 one-on-one formal field interviews of tour operator managers about their commercial operations. The field interviews, approved and supported by Parks Canada, were conducted from June to November in 2011 in both Banff and Jasper national parks.

Parks Canada provided a list of tour operators with business licenses that operated in Banff or Jasper or both national parks. These lists consisted of 60 businesses that had addresses located within the parks.

In addition, the Banff and Lake Louise Tourism Bureaus were consulted and the Internet and phone books checked for possible enterprises missing from the original list. In the end, the final list consisted of 80 possible interviewees.

It was discovered that over 2000 businesses, from all over the world, operate tourism itineraries in these two national parks but only 80 locate their businesses directly within national park boundaries, usually in the Banff and Jasper town sites.

The main goal of the field interviews was to understand tour manager's concept of environmental supply and gain an understanding of the role of environment in their commercial tourism activities (McNICOL, 2015a).

To understand who they are, when and where they go within park boundaries, why they are using park landscapes, what activities they participate in, their understanding of environmental policies, and how they are defining environmental supply within these national park environments as these pertain to

the quality of business operations and commercial visitor experiences. Seven key questions were asked of each interviewee within a semi-structured and open-ended format, as it follows:

1. What recreation activities are you offering?
2. What countries do your clientele represent?
3. What locations in the national park do you visit and why?
4. What types of environmental supply characteristics are important for the quality of running your business?
5. What aspects of the ecosystem are most important for a successful activity by your tour company?
6. What aspects of park management are the most important for a successful activity by your tour company?
7. Is there anything else you would like to discuss about conducting a) quality visitor experiences and b) successful commercial tourism operations in Banff (or Jasper) national park?

The interviews took on average 20 minutes to complete and ranged from 10 minutes to 45 minutes. Interviewees had difficulty with some of the terminology, especially with questions 4 and 5. The definitions of the terms 'environmental supply' and 'aspects of the ecosystem' were provided to the interviewees on a piece of paper so that they could read the definitions themselves.

These field interviews were confidential for the interviewee. Responses were presented as descriptive and anonymous statements. The interviews were transcribed and responses were classified into categories based on key terminology. For the purposes of this paper, the key questions, specific to commercial operators understanding and perception of environmental supply, were questions 4, 5, 6 and 7 which formed the categories for indicators of environmental supply.

2.2 Stage 2

Categories of environmental supply were determined from the field interviews and prioritized. For stage two of this research, a pilot mail back questionnaire to refine and tentatively rank the established indicator categories was circulated to a full sample (N=80) of commercial operators in these national parks during June and July 2014. Results of the pilot survey were N= 80, n=17, return rate=21.25%.

Due to the low return rate a decision was made to place the final version of the questionnaire online, shorten the length of the questionnaire and use emails for access to the commercial operations. Any

individual problems with questions were identified and limitation of information and categories were completed.

A main goal was to streamline the questionnaire and limit final categories of indicators to a manageable six per question for the online questionnaire. Open questions were removed with the exception of a final comment category.

2.3 Stage 3

The final online questionnaire was sent to commercial tour operators (N=84) during August 2015. The final return rate was 41%. Field research during this time also included another 16 final formal interviews directly addressing evaluation of the defined indicator categories.

The field interviews were implemented to receive feedback on the different indicator categories and their importance to each of the 16 tour company managers interviewed in Banff and Jasper national parks during the summer of 2015.

This mixed methods approach will, in the end, provide both objective rating with ranking of the categories of environmental supply as well as subjective interpretation of the types of considerations deemed important by tour managers.

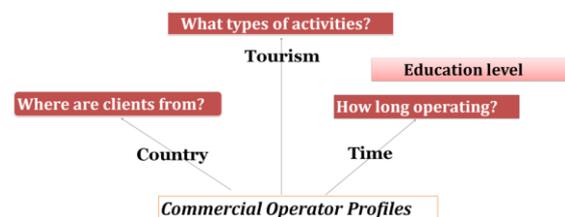
Data analysis and results of stage 3 are currently being produced for future scrutiny and application.

3 RESULTS AND DISCUSSION

Stages one and two of the research have been completed and are presented here.

Data from stage one, the field interviews, were used to create the indicator categories evaluated during the stage two, pilot survey. Profiles of the commercial operators were created and included an ability to screen for type of activities, client countries, length of business establishment and educational level of the operators (Figure 2).

Figure 2: Commercial Operator Profiles.



Source: Prepared by the author with the research data.

Both 1) the educational level of the tour operators and 2) the length of the business establishment were aspects self-identified and raised as important by operators during the stage one field interviews. Since education levels of commercial tour operators was not included in stage one field interviews it was added as a screening question during the stage two and three questionnaires.

The age or 'longevity' of a tour business operating within either Banff or Jasper was a concern that was emphasized repeatedly during stage one interviews. For example, Brewster's Inc. (Guiding Company) was established in 1892, not long after park designation in 1885, and continues to operate a diversity of tourism opportunities within both Banff and Jasper national parks. In fact, new infrastructure, such as a glass glacier walkway and viewing platform has been recently established by the company.

Other, newer, usually smaller businesses must now establish themselves within a hierarchy of well-established older tour businesses. In the other hand, older companies expressed a need for "better screening processes for newer companies" while newly establishing businesses suggested that "smaller businesses are hurting" and finding operating difficult "to compete with tour businesses from outside the park".

The final comment refers to the many newer commercial tour operators that have been encouraged by Parks Canada policies to establish outside national park boundaries, developing operations in neighbouring towns and cities, and transporting tourists in and out of the parks on a regular basis (McNICOL, 2015a).

Stage two of the research eliminated those indicator categories that were not rated as important based on a scale of 1 to 5 where 1 was considered the most important to the success of the commercial tour business and 5 was considered the least important. This removed those indicator categories rated from 3-5 which were identified as less important to the success of the commercial tour businesses.

As a result of the pilot study, the final indicator categories of environmental supply, based upon operator's understanding of the definition of environmental supply were included for ranking and quantitative evaluation on the final online questionnaire. These categories are presented in Table 1.

Success of commercial tour businesses relies first and foremost on client safety, long-term sustainability of the business and quality tourism experiences. However, there was also a strong emphasis on environmental protection.

Table 1: Indicator categories of environmental supply as identified by commercial operators as directly related to success of the commercial tour business.

Category	Mean	Median & S.D.
Client Safety	1.13	1.1; 0.059
Long-term Sustainability	1.35	1.1; 0.795
Quality Experiences	1.44	1.1; 0.888
Ecological Protection	1.46	1.2; 0.496
Group Size Limits	1.51	1.1; 0.685
Sustainable Practices	1.51	1.1; 0.849
Zoning and Access	1.56	1.3; 0.669
Visitor Education	1.74	1.25; 0.833
Park Interpretation	2.07	1.7; 1.145

Source: Prepared by the author with the research data.

This was echoed during interviews when 'ecological protection' was mentioned as an important characteristic of environmental supply during five of the sixteen interviews.

It is clear that the tourism businesses interviewed had understanding and placed priority on their environmental commitments while operating within a protected area. One commercial tour operator suggested that there should exist "more opportunities to create awareness around preservation of the park" and another stated that "business growth should provide opportunity to create an experience without compromising ecological integrity within the park".

Discussion during the interviews indicated that conservation and ecological integrity were very important to most commercial tour operators conducting tours in Banff and Jasper national parks.

Questions about environmental supply were asked in a variety of different ways to clearly establish all relevant categories of importance to the quality success of tour operations in national parks.

Table 2 Indicator categories of environmental supply identified as directly related to aspects of park management for successful activities.

Category	Mean	Median & S.D.
Trail Maintenance	1.46	1.3; 0.479
Balance of Environment & Business	1.49	1.2; 0.514
Wildlife Management	1.53	1.25; 0.658
Park Management Plan	1.65	1.2; 0.739
Facilities & Infrastructure	2.07	1.8; 1.051
Warden Service	2.21	2.25; 1.009
Growth of Tourism	2.43	2.35; 1.312
Communication about Park Goals	2.53	2.1; 1.138
Product Development	2.72	2.4; 1.334

Source: Prepared by the author with the research data.

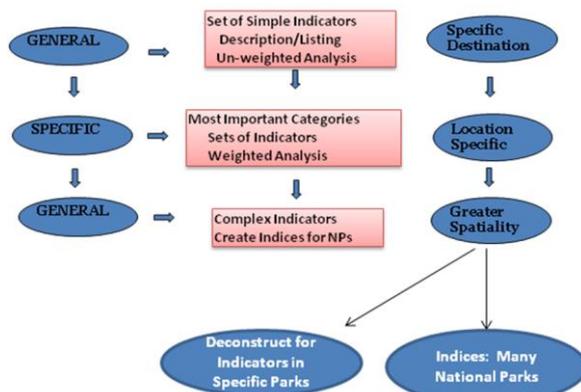
In table 2 the categories related directly to aspects of park management most important for successful activities by a tour company are identified. Therefore, the indicator categories have moved from general aspects of environmental supply, which contribute to a successful business, to those indicator categories that reflect the success of tour activities within those tourism businesses. This data will be weighted and analyzed for results from the final online survey.

Concerns, were trail maintenance, wildlife management and the warden service that is in charge of environmental management in the parks. Wildlife viewing is very important to a quality tourism experience in mountain parks and managers are clear that access to wildlife and management of wildlife is important for their businesses. Companies while placing importance on environmental management also saw the need to balance environment with business needs, such as product development, for successful activities.

3.1 From Categories to Indicators

These stages have been designed to create useful indicators of environmental supply that can measure the quality and success of commercial operations in national parks. Simple sets of indicators, such as those described here, can be aggregated together to create sets of indicators. Therefore, these general categories will prove useful for creating indicators for assessing a specific destination while the further creation of sets of indicators will be specific enough to evaluate location-specific landscapes and targeted tourism environments within the national parks. Eventually the creation of complex indicators, into an index, should become useful for evaluating and even comparing different national parks and spatial units in different countries (Figure 3).

Figure 3: From categories to indicators based on empirical research.



Source: Prepared by the author with the research data.

The challenge becomes defining a set of indicators that, while clearly subjective, are conditioned by the characteristics of the context of 'environmental supply'.

The final indicators, therefore, should be relevant to stakeholders, evidence-based, transparent, adaptable and comparable. Comparable in that each general indicator may be deconstructed within any national park to identify the parameters of the specific geographical and social environments located there.

It should be noted, that this process for elicitation of stakeholder defined indicators of environmental supply could eventually use the same procedures and methodology for other high use and diverse activity parks in other countries in the future (see Figure 3).

The final goal of this research is to provide a methodology to monitor changes over time using quality success indicators of environmental supply that are also parameters of sustainability, and as a result, provide useful evidence-based scientific data to park managers and commercial operators to monitor guided tour activities in highly visited national parks.

Main considerations about limitations for this research and methodology are that:

- Tour manager priorities in Banff and Jasper may prove different from other stakeholders in other national parks and in other geographical locations.
- Commercial guiding activities require standards that ensure that visitor and environmental conservation goals are being met and these may prove different from policies, accreditation and assessment standards required elsewhere in different geographical locations and other political environments.

4 CONCLUDING REMARKS

This paper provides a summary of stages used to create indicators that evaluate environmental supply by commercial tour operators in Banff and Jasper national parks in Canada.

The development of categories for indicators that measure commercial tour operator and clientele demand against environmental supply supports a 'quality movement' in visitor management that switches the measurement of environmental indicators from those that focus on negative consequences of visitor use to those that place emphasis on the environmental quality and success of the commercial tour experience.

The study also presents a methodology where categories of indicators can be used to create an index where environmental supply can be integrated

into the evaluation of tourism landscapes in high-use national park environments in other countries and geographical locations.

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