



## Moving towards more eco-efficient tourist transportation to a resort destination: The case of Whistler, British Columbia

Jennifer Reilly\*, Peter Williams, Wolfgang Haider

Centre for Tourism Policy and Research, School of Resource and Environmental Management, Simon Fraser University, 8888 University Drive, Burnaby, British Columbia V5A 1S6, Canada

### A B S T R A C T

#### keywords:

Tourism transportation  
Modal choice  
Planning  
Eco-efficiency  
Whistler  
British Columbia

Transportation is not only a key component of the tourism value chain, but it is also a critical management consideration in shaping tourism's environmental footprint. Transportation consumes the greatest portion of the energy used in the tourism system. Most of this consumption is associated with travel to and from the destination. Despite this situation, scant research has addressed ways in which destinations can play a role in reducing this energy use challenge. Strategies such as shifting visitors to more energy-efficient modes have the potential to improve the eco-efficiency of tourist transportation. Using a case study of transportation management options and visitor responses in Whistler, British Columbia, Canada, this paper examines visitor reactions to a range of transportation strategies designed to shift skiers from private to public modes of transport. Respondents completed an online survey employing both traditional and stated choice questioning methods to examine tourists' transportation choice behaviour. Long-haul tourists were the most likely to shift transport modes based on the management options offered to them. Destination management strategies for moving this target group to public modes of transportation are described.

© 2009 Elsevier Ltd. All rights reserved.

### 1. Introduction

By definition, transportation is one of the key components of tourism. All tourists must eventually travel to and from the destinations they choose. This reality makes most types of tourism particularly energy intensive propositions, especially when long-haul air travel or automobile transportation is involved. Even though tourism is often considered a desirable form of economic development, its sustainability (especially from a travel related energy consumption perspective) is challenging (Clark, Jäger, Cavender-Bares, & Dickson, 2001). This is particularly the case for tourism destinations positioning themselves as environmentally friendly places that pro-actively practice less consumptive forms of energy use (Bates & Caton, 2002, Kelly & Williams, 2007a). While much research explores techniques for reducing internal energy consumption within destinations, few investigations have explored consumer responses to methods of decreasing the energy consumption of travel to and from such places. This research examines consumer responses to a range of destination

induced policies designed to reduce external travel related energy consumption. As such its findings contribute to the growing literature on destination sustainability in general, and a specific void related to the management of external energy consumption associated with travelling the final leg of the journey to the destination.

Transportation is frequently identified as a growing concern with respect to tourism-induced energy consumption. Research has shown that transportation typically accounts for the vast majority (in some cases greater than 90%) of energy consumption in the tourism system (e.g., Gössling et al., 2005; Kelly & Williams, 2007b; Peeters & Schouten, 2006; Tabatchnaia-Tamirisa, Loke, Leung, & Tucker, 1997). In many cases, the transport mode choice of visitors plays a key role in determining the overall eco-efficiency of tourism experiences. Indeed, several studies report the energy emission reductions to be gained by shifting tourists to more eco-efficient modes of travel (Becken, 2005; Becken, Simmons, & Frampton, 2003; Gössling et al., 2005; Hoyer, 2000; Kelly & Williams, 2007b), particularly various forms of public transportation.

Eco-efficiency involves producing goods and services that require diminishing levels of energy and material resources (World Business Council for Sustainable Development, 2000). In essence, it is about increasing resource productivity or "doing more with less"

\* Corresponding author. Tel./fax: +1 604 892 9496.

E-mail addresses: [wildreilly@gmail.com](mailto:wildreilly@gmail.com) (J. Reilly), [pwilliams@sfu.ca](mailto:pwilliams@sfu.ca) (P. Williams), [whaider@sfu.ca](mailto:whaider@sfu.ca) (W. Haider).

(DeSimone & Popoff, 1997, p. 2). Given the tourism industry's current dependence and propensity for transport-related energy consumption, it is increasingly becoming the focus for strategies designed to produce eco-efficiency improvements. One key challenge for tourism destination managers is to identify and implement policies that effectively encourage visitors to select more eco-efficient transportation options. This paper explores visitor responses to a range of potential transport mode shifting options in the context of a case study of Whistler, British Columbia (BC), Canada.

Whistler, BC is a four-season destination resort located about 120 km north of Vancouver, BC. It hosts about two million visitors annually with approximately 45% of the visits occurring during the shorter winter season (Resort Municipality of Whistler [RMOW], 2004a). Over the past decade, Whistler has developed and/or initiated a wide variety of sustainability policy, planning and programming initiatives designed to make it a more sustainable destination (RMOW, 1999, 2004a, 2004b, 2005a, 2005b; Vance & Williams, 2005). Some of these strategies focus on reducing transport-related fuel consumption and related emissions within and beyond the municipality.

Whistler was the final destination for over 60% of all trips on the Sea to Sky Highway, the route that connects Vancouver to Whistler and other nearby communities (RMOW, 2004a). About 65% of non-resident visitors to Whistler arrived by air in Vancouver, and then traveled to Whistler by various modes (TSi Consultants, 2002). Of the trips made on the Sea to Sky Highway, about 93% were by private automobile, 6% by bus and less than 1% by train (RMOW, 2004a).

The Resort Municipality of Whistler has outlined the community's vision and strategic plan for moving towards sustainability in *Whistler 2020: Comprehensive Sustainability Plan* (RMOW, 2004b). The document considers the effects of transportation on climate change and air quality in an intra-urban context only (RMOW, 2005b). While the issue of tourist arrivals via single-occupancy vehicles is identified as an indicator of performance, no discussion addresses inter-urban transportation strategies.

*The Whistler 2020 Transportation Strategy* (RMOW, 2005b) recognizes the necessity of transporting tourists to the resort with minimal environmental impact, addressing the viability of alternative intra- and inter-urban transportation options. However, support for alternative transportation must exist outside of Whistler for these strategies to be successful. The provincial government has a significant impact on transportation infrastructure decisions for inter-urban travel between Vancouver and Whistler.

Whistler's Transportation Advisory Group [TAG], formed in 1996, has contributed to inter-urban transportation planning throughout the Sea to Sky Corridor (RMOW, 2004a). TAG aims to encourage more efficient forms of transportation in Whistler (RMOW, 1999). TAG's current goal is to reduce the portion of visitors travelling between Vancouver and Whistler by private automobile by 15% through alternative transportation strategies. However, other recommendations suggest that alternative and more aggressive transportation demand management strategies might increase public transportation use amongst private automobile traveller by 50% over a ten year period (RMOW, 2005a).

While several of Whistler's planning and sustainability initiatives are recognized as particularly proactive (Williams & Ponsford, 2009), no comprehensive empirical research has tested the credibility of the modal shifts associated with the demand management strategies mentioned above. This research identifies a range of these energy reducing external transport options, and examines their influence on traveller mode choice. It does this by first developing a conceptual model that positions external transport within a broader destination transportation model. It then uses findings emanating from a survey of destination visitors to explore

consumer responses to these options, and to suggest ways in which destinations can help shift travellers towards more eco-efficient transport mode choices.

## 2. A conceptual model of destination transportation links

Transportation links tourists with travel destinations (Gunn, 1988; Leiper, 1979, 2004), and tourism is impossible without it. Transportation is an essential and critical component in the management of tourism's value chain. Value chains are the sets of structures and processes used to deliver goods and services to clients. They can help scope and identify the set and sequence of functions needed to produce a good or service, as well as highlight the management activities needed to ensure that the components collectively create value for consumers and the industry (Porter, 1985). The service being delivered, in the case of the tourism industry, is the tourism experience. Transportation plays an important 'flow' function in the tourism value chain. It links tourists at their origin with appealing stocks of environmental and cultural assets at the destination. Long term value is created when the flow of people to a destination creates positive linkages with the environment. The management of transportation's energy related emissions and impacts represent challenges to the tourism value chains of a growing range of destinations.

Several conceptual models highlight and describe the crucial position of transportation in the international tourism system (e.g., Hills & Lundgren, 1977; Leiper, 1979). Hills and Lundgren (1977) describe the functional mechanisms of tourist movement in a long-haul travel context (i.e., travel to the Caribbean) (Fig. 1). The model shows how tourists move from their individual residential locations to a centralized travel hub (airport) in their region. They are then assembled to be transported in planes to the centralized hubs at their destination. After arriving at this central hub, they disperse to a number of different locations for their individual on-site tourism experiences.

While Hills and Lundgren's model goes beyond a simple focus on transportation to explain the fundamental structural characteristics of international travel, it clearly separates the long-haul travel component (likely by air) from the travel components to and from the respective airports. Although not pointed out by the authors, the model identifies clearly the strategic points in this travel process, at which travellers make crucial mode choices. The question is how and to what extent travellers can be influenced by various destination transport management options.

In order to make this conceptual model applicable to the case study of Whistler, we adapted it to the specific long-haul transportation characteristics of typical winter destination resorts in general, and the Vancouver – Whistler situation in particular (Fig. 2). Whistler also attracts a large number of short-haul visitors from Vancouver's nearby metropolitan area, and from other proximate urban centres such as Seattle, Washington. These short-haul skiers join the long-haul visitors when travelling on the final leg of the journey, in this case the Sea to Sky Highway.

In our adaptation of Hills and Lundgren's model (Fig. 2), we placed the destination of Whistler, British Columbia, at the second level of the diagram. The left (A) and right (B) sides of the diagram are linked through transportation, corresponding to the Hills and Lundgren model. The right side (B) of the model is the main focus of this investigation. It focuses on the dispersal of tourists upon arrival at a central hub (YVR – Vancouver International Airport) to resort facilities at the regional level (W – Whistler). On their arrival at the Vancouver International Airport, tourists have several transport mode choices, represented by the multitude of arrows linking the international airport and Whistler. Currently, the only

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات