

Beyond the Cruise: Navigating Sustainable Policy and Practice in Alaska's Inland Passage

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Introduction

In the middle of a global economic recession, cruise tourism continues to be one of the major growth engines of international travel. With 'average annual increases in passenger numbers of 8.2 per cent over the last two decades' (Mittermeier, 2007, p1), and sustained 'growth in cruise capacity averaging 7.6 per cent annually', (North West Cruise Ship Association, 2009, p1), the resilience of the industry is clearly displayed in Alaska and the Pacific Northwest, one of the fastest growing cruise destinations in the world (see Figure 13.1).

In ports from San Francisco to Seward, passengers are enticed aboard ships with onboard credits and free upgrades to 'Explore breathtaking landscapes and come face to face with the people and wildlife [who inhabit] the stunning alpine meadows and glacial wonders of Denali and the Talkeetna Mountains... This is the perfect non-camping itinerary for those looking for comfort in the natural wonderland of Alaska' (World Expeditions, 2009, p1). For residents, however, the experience of cruise tourism is often less well described: inundated by summer passengers and carrying the costs of funding and maintaining community infrastructure for a seasonal industry that is known to relocate vessels to competing ports whenever financial incentives warrant.

The transition in rural Alaska's economy from natural resource extraction to tourist attraction has engendered a modern 'gold rush' as cruise providers and operators expand their itineraries and marine destinations now compete for passengers. Communities historically dependent on fishing, mining or logging now (re)create their heritage for visitors in search of recreation and education. The result is an ever-evolving landscape of scenic summer attractions and a population that seeks fruition through tourism, yet increasingly finds frustration in the transitory nature of an industry in transition, both regionally and globally (Peck, 2009).

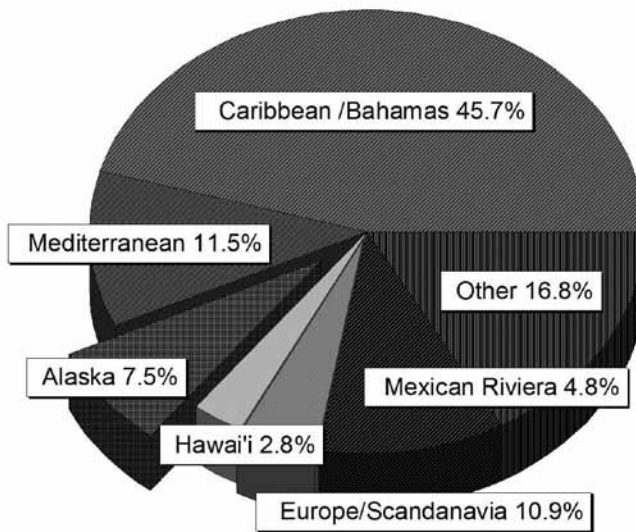


Figure 13.1 Preferred cruise destinations worldwide, 2008

Source: J. Hansen, NW Cruise Update, San Francisco, 13 February 2008

The nature of this conflicted relationship for Alaska's cruise communities, and the alternative outcome suggested by more sustainable nautical tourism practices are the focus of this chapter. The intent is to highlight the critical socio-economic and environmental costs of unregulated cruise tourism, and to offer instead a vision and management framework that may reduce operational costs and impacts, and, thereby, profit – and sustain – cruise communities, companies and conservation. In a state already affected by higher gas prices and fewer overland travellers, the decline of ship passengers in the 2009 summer season only adds to the 'rough seas' that confront the state's visitor and hospitality companies today (Jackson, 2009).

Despite the discontent, continued growth in the Alaskan market, surpassing 1 million visitors in 2007 and 2008, is expected, albeit at a much slower pace until the global economy improves (*Chicago Sun-Times*, 2009; *SeattleTimes.NWsource.com*, 2009). Although 'cruise line revenue is down about 40 per cent for Alaska, compared with 10 to 15 per cent for areas like the Caribbean' (Associated Press, 2009c, p1), a new cruise terminal opened in Seattle for the 2008 season, with 20 more port calls than the previous year, and Ketchikan, in south-east Alaska, now has two cruise berths under construction. Meanwhile, other cruise lines, including Disney, announced plans to base ships in the Pacific for the Inland Passage as well (Cervený, 2004; Gibson, 2006; Peisley, 2006; Lück, 2007; Servos, 2007; Brida and Zapata-Aguirre, 2008; Chafe, 2008; Hansen, 2008; Ruff, 2008; Westoby, 2008; Browne, 2009).

Sailing on seven- to ten-day itineraries, most Alaskan cruises traditionally follow two major routes that either begin and terminate in the US, or travel one way between Canada and south-central Alaska (see Figure 13.2). The former usually departs from



Figure 13.2 *Inland Passage cruise ports, Alaska and Pacific Northwest region*

Source: G. Ringer, 2009

San Francisco or Seattle, with stops in Oregon and Victoria or Prince Rupert, British Columbia, en route to south-east Alaska. One-way cruises sail between Vancouver, British Columbia, and the Alaskan ports of Seward or Whittier, while 'pocket cruises' offer three- to four-day trips solely within Canada to the Pacific ports of Nanaimo, Campbell River and Prince Rupert. These small expedition ships, promoted for their socially and ecologically friendly practices, reduced passenger loads (typically not exceeding 150 tourists) and 'value-added' cruise experience are able to call at ports inaccessible to the larger cruise vessels, including the provincial capital of Victoria (Klein, 2005; Ringer, 2006).

As a result of the growing popularity and operational range of cruise ships, the contribution of the industry is significant for both urban and rural communities along the Inland Passage. The Carnival Corporation alone now carries approximately 560,000 passengers to Alaska each year onboard 1 of 16 ships operated by three subsidiaries: Holland America Line, Princess Cruises and Carnival Cruise Lines. In Canada, the Pacific ports of British Columbia 'accounted for 73 per cent of the [total] Canadian cruise passenger traffic' (BREA, 2008, p5), with almost 2 million visitor arrivals recorded in 2007 during the abbreviated six-month cruise season of May to October. Of this total, approximately 960,554 passenger embarkations, debarkations and port-of-call arrivals (50 per cent) were recorded by Vancouver port

authorities. The Port of Victoria reported another 324,000 cruise tourists (17 per cent), with an additional 98,354 from Prince Rupert (5 per cent). For all three ports, the numbers reflect a continued upward trend in cruise tourism in Canada, especially British Columbia. The province 'welcomed more than 1.4 million passengers in 2007' (Cruise BC Association, 2008, p1), while 'cruise passenger arrivals have increased by 24 per cent, or slightly more than 378,000 passengers' (BREA, 2008, p6) over the past five years.

This visitor data also suggests the economic importance of the industry to the province, where spending by cruise passengers, crew and marine recreational providers generated more than Cdn\$1.5 billion in direct and indirect spending in Canada in 2007 (BREA, 2008). This income, representing almost Cdn\$169 per passenger, helped to create almost 10,000 full- and part-time jobs for local residents. Most of the activity (68 per cent) occurred in coastal British Columbia, which benefited from the Alaska-bound cruise traffic and passenger purchases ashore during scheduled port calls. However, the interior of Canada and Alaska is also positively affected by the cruise market, both as a source of domestic passengers and ancillary business services, and by the increasing number of cruise tourists who take advantage of pre- and post-cruise options to tour national parks in Alaska, northern British Columbia, Alberta and the Yukon Territories. Indeed, the influence, and affluence, of passengers who extend their cruise ashore is a substantial contribution to the economies of many inland communities: 'According to Fairbanks Convention and Visitors Bureau Executive Director Deb Hickok, about half the 400,000 annual summer visitors to the Interior reach Alaska on a cruise (Associated Press, 2009, p2; see also Ray and Williams, 2003; Cruise BC Association, 2009).

Unfortunately, the average time ashore for the majority of the 1.6 million passengers and crew who disembarked in 2007 was only 4.1 hours, which limits business access, as well as visitor satisfaction and awareness of the destination and available marine resources (see Figure 13.3). Furthermore, nearly 67 per cent of the cruise passengers purchase only duty-free goods in company-affiliated stores, while 90 per cent of those who purchase shore excursions also buy directly from the cruise company, rather than from a local tour operator. As a result, the full benefit of visitor spending in Alaska and British Columbia is diminished by leakage to non-local suppliers and service providers. The economic disparity is compounded by the global recession, as tourism officials in Alaska forecast a 30 per cent drop in summer visits in 2009 (Sheppard, 2005; Stewart and Draper, 2006, 2008; Véronneau and Roy, 2009):

Cruise lines, in particular, are heralding declines. The Alaska Cruise Association represents nine cruise lines that bring about 1 million visitors to Alaska annually. 'All the indications from them are that bookings and sales are off dramatically', association President John Binkley said. 'Our hope is that the trends are just changing, that people will eventually come, but they're waiting to book... Hopefully, it will start to turn around, and we'll be able to hire more people than we anticipate.' (Koumelis, 2008, p1)

Since each visitor spends an average of US\$1000 while in state, the loss of jobs and revenue is expected to be dramatic: 'That money probably rolls around the

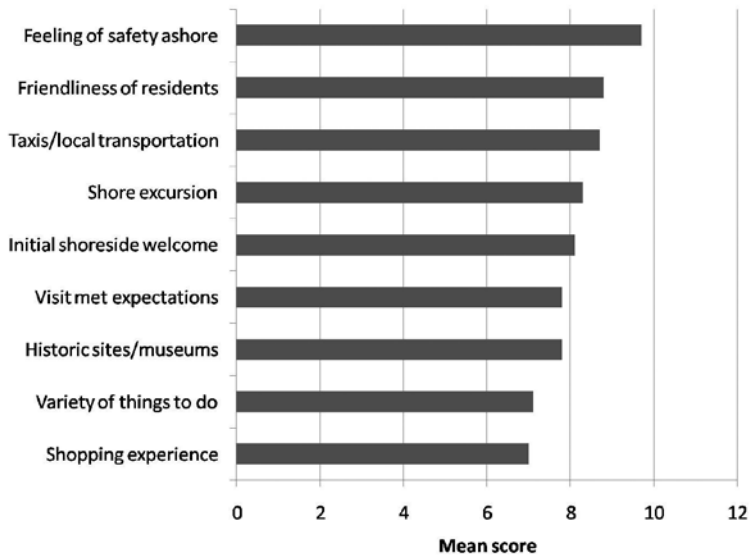


Figure 13.3 Passenger satisfaction with destination visit, Canada
(score of 10 = extremely satisfied, 1 = not at all satisfied)

Source: BREA (2008, p15)

economy two and a half, three times ... \$1.7 billion easily becomes \$3 billion to \$5 billion in economic activity' (Koumelis, 2008; see also Associated Press, 2009a; Jackson, 2009). For this reason, while the current economic outlook is questionable, the long-term importance and benefits of cruise tourism to Alaska and the Pacific Northwest region remain unquestioned. Instead, several Alaska law-makers are calling for their state government to provide even more money for the industry, given the financial benefits that extend to Alaska's coastal and interior economies during the summer cruise season. The Government of Canada also negotiated new economic development agreements with the western provinces to take advantage of the industry's presence, and to encourage complementary business activities and tax policies (BREA, 2008; Western Economic Diversification Canada, 2008).

Current policy and practice

Cruise tourism in the Inland Passage is a sector equally dependent on environmental stability and sustainable practices by both vessel operators and destinations. The two parties have certainly made credible progress in actions taken since the mid 1990s to eliminate or mitigate the impacts of cruise tourism on the terrestrial and marine environments upon which this segment depends. These steps include a decline of almost 50 per cent in garbage and human waste produced onboard ships, and an equally dramatic reduction in airborne particulate emissions. Yet, tourism proponents and opponents alike continue to express serious concerns over the

accelerated environmental degradation attributed to cruise ships and passengers in the Inland Passage (Johnson, 2002; Ringer, 2006; Mittermeier, 2007).

Reputedly one of Alaska's – and the world's – largest service industries, tourism plays a dominant role in the state's development, where it has long been guided by respect for, and inspiration from, history and culture: 'Businesses that provide knowledgeable guides and highlight cultural events and traditions help preserve community identity while enhancing the experience of their clients' (Adventure Green Alaska, 2009, question 26). At the same time, 'As tourism continues to become an even more important part of the state economy, so too will the need to protect the very things those tourists come to see: mountains, glaciers, forests, ocean, wildlife, and authentic communities' (Adventure Green Alaska, 2009, question 2). As a result, if effective action is not taken immediately to manage cruise numbers, landings and routes in the northern Pacific, critics assert that the industry could endanger the terrestrial and marine ecosystems where it operates, the local infrastructure and transportation network that support it, and the wildlife and biophysical resources on which it depends (Ringer, 2006, 2007; Robertson, 2008; Brida and Zapata-Aguirre, 2008, 2009; Véronneau and Roy, 2009).

Already, they complain that 'Cruise ships emit three times more CO₂ than airplanes' (Environmental Leader, 2008, p1), a source of concern among some in the state capital, Juneau. A major cruise company, 'Carnival Cruise Lines, made up of 11 distinct lines, emits about 401 grams of CO₂ per passenger' (CruiseLineFans.com, 2009, p1) in a city where coastlines are now rising as glaciers and the sea retreat due to climate change from carbon dioxide emissions (Dean, 2009). Environmental pollution is also a continuing source of aggravation for coastal residents and the Alaska Department of Environmental Conservation (ADEC), whose regulators issued ten violation notices and 'cited eight cruise ships for air quality violations in 2008' (Associated Press, 2009b, p1; see also Anderson, 2005; Carnival Corporation, 2005; Carlock, 2006; Rice, 2006; Ringer, 2006, 2007).

These citations, levied against five of the largest cruise companies in the world – Royal Caribbean, Princess Cruises, Holland America Line, Celebrity and the Norwegian Cruise Line – represent a 500 per cent increase from the previous year. Equally problematic for ADEC regulators and 'sustainable tourism' advocates, the legal actions undertaken by the State of Alaska now mean that 'every major cruise line has been convicted on felony charges for dumping wastes into public waters' (Cohen, 2008, p1; see also North West Cruise Ship Association, 2009). John Brinkley, president of the Alaska Cruise Association, believes the number of violations (10 violations out of a total of 224 readings) is relatively insignificant, suggesting that the industry has only 'dropped from an A+ to a solid A' (Associated Press, 2009b, p2). But cruise officials warily note that the 'Alaska cruise industry is having trouble getting traction with [Alaska state] legislators to abolish a strict water-pollution rule approved by voters in 2006' (Bluemink, 2009, p1).

The rule requires cruise ships to obtain new pollution permits, post environmental waste monitors and independent marine engineers (ocean rangers) on every vessel, and discontinue emission and particulate discharges in specified 'mixing zones',¹ or areas where 'Alaska's water quality standards for toxicity, copper, zinc, nickel and ammonia won't apply' (Cohen, 2008, p1). To fund programme administration and

enforcement, a gambling tax was instituted on onboard gambling within state waters, as well as the first corporate income tax on cruise ships. A US\$50 tax was levied on each passenger as well, in addition to a US\$7 passenger tax imposed by the port of Ketchikan, and US\$8 per person for cruise ships that visit Juneau (de Place, 2008).

Cruise proponents spent more than US\$1 million on advertising costs alone in their failed effort to defeat the initiative, which passed by a slight majority of voters. However, despite fears the new taxes would reduce company profits, and claims that the taxes would dissuade both ships and passengers from visiting, the number of cruise departures, visitors and spending all climbed in 2007 and 2008 instead. Perhaps more importantly, during both years the 'cruise law generated more than \$100 million in state tax revenue' (Bluemink, 2009, p1). Of this total, almost 20 per cent was given to coastal port communities for cruise-related construction and infrastructure improvements crucial to their emerging tourism programmes (Klein, 2005; Carnival Corporation, 2006; Cohen, 2008).

Even so, the cruise industry – with the aid of city councils and local organizations in the ports of Seward, Ketchikan, Whittier and Juneau – is again contesting the law as overly stringent and a significant impediment to cruise expansion. The primary complaint remains the lack of 'mixing zones'. Cruise owners further argue that they are required to achieve a higher standard than applied to other industry polluters. Already, they note, initial tests undertaken by federal and state agencies indicate some cruise ships will be unable to satisfactorily reduce copper and ammonia concentrations as mandated by the new regulations. Ironically, ship-owners say that the source of the ammonia is human urine, which is concentrated in higher amounts by the water conservation measures and ultra low-flow toilets installed onboard ships to reduce their ecological impact (Green Meeting, 2008; Environmental Leader, 2009).

The environmental challenges of cruise tourism are further exacerbated by persistent trends and reports of the declining quality of terrestrial and marine ecosystems – which are so vital to the cruise experience. Cruise ships offer millions of people worldwide a chance to learn about the world's oceans and marine resources. At the same time:

... a typical 3000 passenger cruise ship each week generates 210,000 gallons of black water, which is raw sewage; 1 million gallons of grey water, including runoff from showers, sinks and dishwashers; and 37,000 gallons of oil bilge water, which collects in the bottom of ships and contains oil and chemicals from engine maintenance that are toxic to marine life. (Alaska Oceans Program, 2009, p1)

While cruise ships are exempt from Canadian regulations to protect marine wildlife, they are restricted by federal legislation in Alaskan waters. However, the rules have been weakened in the past decade as legislators respond more favourably to business interests. As a result, there remains a troubling sense that the cruise tourism sector is still unconcerned with its environmental performance, given the failure of ship-owners and other destination stakeholders to acknowledge or prioritize sustainability issues (CELB, 2008).

This deficiency is further reflected in 'a lack of inclusive government guidelines for the Canadian cruise tourism industry' (Marquez, 2006, pviii), an omission attributed

to the widely held perception that it is a 'safe and economically viable industry' (Marquez, 2006). Unlike the US, where state legislatures in Alaska, Washington, California and Oregon have restricted cruise emissions and pollution, 'Protection of BC's [British Columbia's] marine environment is left to the federal government, which has taken a "voluntary self-regulation" approach to the industry, issuing pollution prevention guidelines it hopes the industry will respect' (Klein, 2005, p16).

As a result, ships visiting ports in Canada while en route to Alaska or Seattle face less stringent controls, and are able to discharge sewage and sludge banned from US waters. The apparent lack of awareness and enforcement is also evident in the failure of Canadian and US agencies to fully comprehend or evaluate the impacts of cruise tourism on indigenous peoples and their cultural landscape. Yet, Marsh and Staple (1995, p71) urged, more than ten years ago, that 'given the fragility of some of the ... Arctic environments and the vulnerability of small, remote, largely aboriginal communities to impact, great care must be exercised in using the area for cruise tourism'.

Added to these demands, the continued global economic recession will place additional pressure on cruise companies to reduce conflicts and costs. As lines struggle to maintain profitability and compete for tourists, they must also successfully demonstrate their environmental commitment to the growing number of passengers in search of shore and ship activities that blend leisure, native culture, and 'wild and scenic' nature. Already, Royal Caribbean and Cruise West have announced plans to pull five ships from the Alaskan market in 2009 to 2010 due to the financial and environmental costs, and the Alaska Travel Industry Association (ATIA) recently launched an 'emergency campaign' to better promote the state's access, 'With cruise lines and tour operators cutting prices and adding value' (Browne, 2009, p2; see also Arsenault, 2009; Joling, 2009).

It is essential, therefore, that cruise operators and decision-makers now collaborate more effectively in environmental management, including the collection and disposal of waste onboard ships, and focus on 'intra-societal equity rather than merely accept the prospect of short-term economic gain' (Johnson, 2002, p1) when developing cruise- and community-related activities. To do so, Alaska's ports must consciously decide what kind of cruise tourism they desire, in terms of scale and public investment, and how best to balance 'income and growth on the one hand and preservation of local heritage and beauty on the other' (Klein, 2005, p5):

To address these challenges, major stakeholder groups need to work together to maintain, protect and preserve the quality of natural and cultural resources in cruise destinations. From cruise lines and governments to civil society organizations and shore operators, they all have a stake in ensuring a healthy future for each destination and for cruise tourism around the world. (Mittermeier, 2007, p1)

The cruise lines can help to preserve Alaska's human and natural landscapes through careful promotion, and the selection of socially and environmentally responsible operators and service providers in port. Doing so will further maximize the benefits of their visits for local governments and residents, and provide the best possible long-term learning experience for the passenger. To do so, however, will require a

model of stewardship that balances the desired growth in visitor facilities and users with conservation of the resources that maintain the cruise business, so that tourism will continue to provide long-term benefits for visitors, residents and the marine environment alike.

Sustainable Alaskan cruise tourism

The growing cruise demand worldwide presents significant opportunities and challenges to destination planners in terms of local capacity, quality and competitiveness. While Alaska's ports offer tremendous advantages to the cruise tourist in search of natural scenery, native culture and 'mega-charismatic' wildlife (such as grizzly and black bear, moose, whales and bald eagles), many visitors also witness overcrowding, price gouging and environmental harm from unsustainable services and illegal activities. As a result, managers must reconcile these divergent experiences, while protecting the integrity of Alaska's tourist resources in a manner that simultaneously sustains the industry's competitive advantages, entices visitors in search of marine and nature-based learning and recreation, and satisfies local desires for economic sufficiency.

Fortunately, there are signs that a more sensitive – and sensible – approach is gaining adherents, as more stakeholders recognize their shared interest in, and co-responsibility to sustain and protect, the social and ecological integrity of the cruise destination. In collaboration with governments and non-government agencies and tour operators, the cruise industry is proactively seeking to 'ensure a sustainable future for cruise tourism while preserving cruise destinations' (Teixeria, 2006, p1), and the integrity of their cultural and natural heritage. Many cruise lines, including Holland America, have installed certified marine sanitation devices and wastewater purification systems on all of their Alaskan vessels, and aggressively sought to reduce excess plastic and non-recyclable packaging. Others have reduced the use of hazardous materials onboard, replacing them with soy and plant-based cleaning products instead (World Travel and Tourism Council, 2002; Park, 2005; Pedrick, 2005; Horak et al, 2006; Valenti, 2006; Kmet, 2008).

As a concept, 'Sustainable tourism is guided by the principle of a qualitative economical growth' (Lighthouse Foundation, 2008, p2), where the destination's welfare and ecological integrity are integrated within the social and environmental planning that guide and support cruise tourism. Increased traveller demand for 'authentic' experiences and a geographic 'sense of place' have also stimulated greater interest by cruise officials, who desire to satisfy the 55.1 million Americans classified as sustainable tourists or geo-tourists (Crannell, 2008).

Applicable to any form of tourism or destination, the principles of sustainability – and related management guidelines and practices – establish a balance between the multiple socio-cultural, economic and environmental dimensions of tourism development. Measured against a set of standards established by community leaders and cruise operators to preserve Alaska's bio-cultural heritage through nautical tourism, the sector's contribution to the region's attraction value is maximized through the direct participation of cruise tourists in intercultural exchanges and protection of the

region's ecosystems 'in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems' (Neto, 2003, p6; World Tourism Organization, 2004; Romero and Castaneda, 2008).

Along the Inland Passage, the primary concerns of Alaska's port communities are now addressed through comprehensive assessments of cruise tourism activities, and analytical measurements of their ecological and social 'footprint'. These examinations may include whether a ship uses local agriculture products in its dining areas, the existence of problems associated with ship-provided recreation, or the presence and efficiency of cruise waste disposal systems and recycling practices. In addition, regulatory criteria and recreational activities are sometimes designed to encourage greater cultural and environmental awareness. For example, many Alaska-bound companies, such as Princess Cruises, provide onboard lecture topics on Alaska's geography and wildlife, or US Forest Service interpreters who share site- and species-specific details. Others have installed scientific equipment and conduct research for universities as part of a broader effort to learn more about critical marine environments and the consequences of climate change.

Community stakeholders (governments, travel providers, visitors and local residents) are also working together to establish appropriate performance standards and quality assurance indicators for visitors and vendors alike. Land- and marine-based tourism activities are frequently monitored to assess successes and areas of improvement, while voluntary protocols, acceptable levels of change, and established 'best practices' encourage compliance by cruise companies intent on reducing costs, yet maintaining quality services. Collectively, these social and environmental indicators measure performance over time, and often suggest emerging issues overlooked by those less concerned with visitor satisfaction with the cruise experience. Ship programmes, tours and operations also contribute to sustainability through local capacity-building and job training, and some smaller cruise lines enable local communities to profit from the increased tourism through business partnerships, and the direct sale of souvenirs and services to ship passengers (CELB, 2008).

As a result, a new 'skill set' is now evolving between port planners and cruise managers, one that emphasizes process, rather than strategy alone. While the motives behind these efforts to craft a sustainable cruise business model may be viewed cynically by some as more promotional than practical, there is a growing consensus that the industry has an important role in community development and conservation. Indeed, this opportunity – and critical need – for cruise lines to both lead and educate in the 21st century was reiterated by Russell Mittermeier, president of Conservation International, who noted:

Although cruise tourism has the potential to overwhelm fragile destinations if not managed effectively, the industry is also a great potential ally for conservation because many cruise passengers are attracted by the opportunity to experience new places and cultures. (Mittermeier, cited in Teixeira, 2006, p3)

Whether, and to what extent, the cruise industry responds to this paradox will ultimately determine whether it successfully sustains Alaska as a destination for tourists in search of 'wildness and authentic' indigenous history.

Conclusions

The constructive measures now under way in Alaska certainly have the potential to make cruise tourism more sustainable and profitable for the companies, ports and Alaska's people. To do so, however, tourism and community leaders must successfully overcome many obstacles if the industry is to satisfactorily:

- develop and market a quality cruise product;
- safeguard affected port destinations;
- ensure personal health and safety concerns;
- satisfy market demand; and
- fully protect the natural environment.

The operation of cruise ships in south-east Alaskan is already inducing changes in the identity, structure and behaviour of both human and biological systems, and communities throughout the state. Whales and other marine life are threatened by cruise boats, habitat loss, and air and water pollution, while greater numbers of cruise ships transiting the same waters and ports reduce vessel safety and the quality of the visitor experience ashore.

The most prominent challenges today, therefore, for state regulators, residents and the cruise lines are twofold:

- 1 how best to identify and measure the achievement of 'sustainable' indicators; and
- 2 how to implement these standards agreeably and constructively.

Also needed are interpretive signs and educational programmes that improve passenger awareness of Alaska's natural heritage and human geography, and assist travel providers in reinforcing the importance of protecting the state's marine assets through their private business operations. In this manner, the tourism sector could directly reduce visitor impacts upon marine life, cultural sites, protected parks and subsistence lifestyles.

In order to accomplish these tasks successfully, relevant research data and visitor materials are required that explicitly link marine conservation, outdoor recreation, cultural interpretation and community education. Detailed knowledge of preferred visitor activities and attractions is also essential in order to identify the experiential outcomes desired by cruise tourists, the most appropriate indicators of sustainability for individual destinations, and the management pathways that would best lead to greater support and active involvement by visitors, communities and cruise companies.

Industry and port planners also have need of tools to identify sustainable practices that mitigate or eliminate the harmful aspects of cruise tourism, and an appreciation of collaborative processes that facilitate the direct participation of cruise operators and community guides. This information will necessitate that a number of related issues be addressed as well, including the following:

- Is the perceived erosion of authentic native Alaska cultures and experiences related to the environmental, ecological and economic damage associated with cruise tourism?
- What can passengers do to reduce their waste and ecological footprint onboard ship and ashore?
- How can cruise passengers best interact with local communities and protected environments in order to educate themselves about their 'host's' identity, and to help conserve community resources?
- How influential are environmental standards and 'green' certifications for passengers when selecting cruise ships and destinations?
- How can resource managers and cruise officials establish and enforce visitor capacity limits (spatial, environmental and experiential) for different recreational locations (land and sea)?

Fortunately, the US Forest Service and other agencies, both public and private, have already taken steps to survey tourists, resource managers and port authorities along the Inland Passage about travel expectations and experiences. As the answers are collected and synthesized industry and community leaders hope to make better informed decisions when they select venues for cruise operations and criteria for accreditation. It should also help them to determine how these operational choices can best reinforce community and conservation values in the Inland Passage (Cervený, 2004; Greve, 2006; Arsenaault, 2008; CELB, 2008; Nanos, 2008; Western Economic Diversification Canada, 2008).

The sinking of the *Explorer* in November 2007, by an iceberg near Antarctica, was a wake-up for those still uncertain about the potential social and environmental impacts of cruise tourism in polar waters. While clean-up crews skimmed some of the '50,000 gallons of marine diesel fuel, 6300 gallons of lubricant and 260 gallons of gasoline' (Robertson, 2008, p1) from the sunken ship, much more leaked into the ocean, where it still jeopardizes marine life and birds (Stewart and Draper, 2008).

Regrettably, the environmental impacts of this sinking, though perhaps the most egregious example of the hazards of polar cruise tourism, are not unique. Instead, Alaskan and Canadian residents, environmentalists, governments and local tourism agencies also express rising concern over:

... the impact of visitors ashore from the smaller tour boats, fearing they could disturb wildlife, trample on important mosses and lichens and damage the region's unique ecosystems by introducing non-native species. Unwanted species can also hitch rides on ships' hulls and are often dumped out in ballast water, as well as latching onto everything from footwear and machinery to camping gear. (Robertson, 2008, p3)

Added to these worries are the emerging effects of global climate change. Although still debated, there is a growing consensus that even micro-changes in Alaska's weather will strongly affect cruise tourism. Some enthusiasts believe the implications will prove positive for cruise tourism, as once ice-free communities gain access to deepwater vessels, and the trade and tourism they make possible. Stewart et al (2007) forecast greater risks through their research undertaken in the Northwest Passage.

They anticipate accidents, similar to the *Explorer*, as sea ice expands. This may also be true for Alaska's northern waters as the Arctic ice melts and sea ice expands.

Whichever scenario ultimately proves true, it is clear that cruise tourism is undergoing a transformation as passenger interests and community preferences change, and conflicts rise over the number and type of cruise ships allowed to operate in Alaska and the Pacific Northwest region. The governments of the US and Canada, through their respective federal and local institutions, have exercised authority and power to regulate travel practices and tourism numbers in the Inland Passage. However, US congressional action has limited the protective scope of some measures in south-east Alaska. Thus, it may be useful to consider how the industry and 'gateway' port communities might encourage practices similar to those outlined in the International Association of Antarctica Tour Operators' (IAATO's) *Guidance for Visitors to the Antarctic*, or the *Guidelines for Visitors to the Arctic*, published by the Association of Arctic Expedition Cruise Operators (AECO). Both guidebooks are intended to 'conduct respectful, environmentally friendly and safe tourism' (AECO, 2009, p9) in biologically rich polar waters.

These regulations, if strictly adopted and uniformly implemented in Alaska and western Canada, would restrict the presence and number of passenger boats in culturally and ecologically sensitive areas, such as Tracy Arm and Glacier Bay National Park. Cruise companies would also be motivated, through government subsidies and favourable business credits, to contract with local guides and business owners to charter their add-on programmes. This action would help to deconstruct the vertical integration common to the industry and thereby reduce leakage of tourist spending outside the destination.

The creation of cruise policies and practices that voluntarily limit the number of ships in port each day is also recommended, as is a greater emphasis on smaller boats and ports: 'Smaller ports can offer as attractive features their size, authentic cultural heritage, nature experiences and eco-tourism' (Klein, 2005, p20). Such assets, if properly managed and marketed, would offer an economic and environmental boon for communities that preserve their heritage. Research undertaken among cruise visitors to a marine park in Vietnam found that self-described 'eco-tourists' spent approximately US\$171 per day. In contrast, tourists interested only in leisure spent approximately US\$128. The implications, thus, are clear for cruise ports that maintain their natural and historic environments: the same income may be gained – with less human impact – by focusing on the quality of the visitor experience, rather than the quantity of tourists alone (Ringer, 2002).

This emphasis on the ecological and cultural integrity of the area can be accomplished most effectively through programmes offered in partnership with service providers and non-profit organizations, such as the North West Cruise Ship Association (NWCA). The NWCA represents the eight major cruise lines operating in the Pacific Northwest, Alaska and British Columbia:

In Juneau, Alaska, the NWCA is helping to engage and educate the community about the cruise industry with an environmental education programme for students from local schools. The programme includes tours of ships docked in port, where students learn about the ships' recycling, emissions and wastewater programmes. Princess Cruises

shows students to its lower deck recycling centre, while Celebrity Cruises includes the engine room on its tours, to show students where emissions are monitored on video cameras and to teach them about gas turbines. HAL [Holland American Line] has provided oceanography classes to local high school students, including environmental tours of their ships' wastewater systems. (Mittermier, 2007, p4)

Another environmentally friendly and informative programme worth replicating region-wide is Holland American Line's Whale Protection Programme, operated in partnership with the US National Park Service and the National Oceanic and Atmospheric Administration: 'This program helps mariners recognize and avoid whales as part of its regular employee environmental awareness training' (Mittermier, 2007, p4).

On the regulatory side, new rules should be enacted immediately to prohibit discharges of sewage, waste, and greywater within 12 miles (19.3km) of US shores, with 'maximum limits for levels of faecal coliform and chlorine in treated sewage and greywater' set by the US Coast Guard and Environmental Protection Agency beyond 12 miles, and a goal of zero pollutants by 2015 (Alaska Oceans Program, 2009, p3). To fund these recommendations, a combination of additional fees and taxes should be targeted at both cruise and non-cruise segments of the Alaskan tourism industry, with a significant portion of the revenue dedicated to 'green' port planning and sustainable cruise development (AWRTA, 2005).

Finally, what is needed most are messages from Alaska's port communities to cruise tourists highlighting their natural and human heritage, and inviting them to help protect it through sustainable travel and a lighter 'footprint'. The linkage of cruise terminals, native communities and national parks could provide a powerful image for passengers in search of indigenous peoples and authentic places, motivating visitors to become more engaged in conservation and sustainable travel practices. Even more hopeful, these connections would allow cruise officials and destination stakeholders to better comprehend and, thus, respond to and sustain the multiple socio-economic dimensions of cruise tourism in Alaska's Inland Passage in the 21st century (Research Resolutions and Consulting, 2004; Nanos, 2008).

Note

- 1 A 'mixing zone' is defined as any surface water body 'in which pollution discharges are allowed to exceed [Alaska's] water-quality standards. They are used by sewage plants, mines, seafood plants and other industries to dilute their discharges. The mixing ban for cruise lines goes into effect' in 2010 (Bluemink, 2009, p1).

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