

Article

# Strategic Development Challenges in Marine Tourism in Nunavut

Margaret E. Johnston <sup>1,\*</sup>, Jackie Dawson <sup>2</sup> and Patrick T. Maher <sup>3</sup> 

<sup>1</sup> School of Outdoor Recreation, Parks and Tourism, Lakehead University, Thunder Bay, ON P7B 5E1, Canada

<sup>2</sup> Department of Geography, Environment, and Geomatics, University of Ottawa, Ottawa, ON K1N 6N5, Canada; jackie.dawson@uottawa.ca

<sup>3</sup> School of Arts and Social Sciences, Cape Breton University, Sydney, NS B1P 6L2, Canada; pat\_maher@cbu.ca

\* Correspondence: mejohnst@lakeheadu.ca; Tel.: +1-807-343-8377

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**Abstract:** Marine tourism in Arctic Canada has grown substantially since 2005. Though there are social, economic and cultural opportunities associated with industry growth, climate change and a range of environmental risks and other problems present significant management challenges. This paper describes the growth in cruise tourism and pleasure craft travel in Canada's Nunavut Territory and then outlines issues and concerns related to existing management of both cruise and pleasure craft tourism. Strengths and areas for improvement are identified and recommendations for enhancing the cruise and pleasure craft governance regimes through strategic management are provided. Key strategic approaches discussed are: (1) streamlining the regulatory framework; (2) improving marine tourism data collection and analysis for decision-making; and (3) developing site guidelines and behaviour guidelines.

**Keywords:** marine tourism; cruise ships; pleasure craft; Nunavut Territory; management; impacts; Arctic Canada

## 1. Introduction

Marine tourism in the Arctic has been growing as tourism demand increases and accessibility is improved [1–3]. Much of this activity involves smaller expedition cruise ships and the larger vessels common in more accessible cruise destinations. Sailboat and luxury yacht travel has also grown. But there are distinct differences in tourism within the Arctic region that reflect particular geographic and political contexts. It is important to consider these particularities in order to understand sustainable tourism and natural resource protection as it relates to marine tourism development in the Arctic.

The entire Canadian Arctic, in comparison to the European Arctic, is at a geographic disadvantage that is largely related to its remoteness from major population centres; as a result, total numbers of cruise visitors to this area are much lower. Planning and investment in cruise tourism infrastructure in Greenland over the past decade has resulted in strong tourism numbers [4–6], while Iceland has experienced a dramatic boom linked to planning and a favourable geographic position (see [7,8]). Svalbard, likewise, has benefited from good planning and management, as well as proximity to large markets. Marine tourism is slowly developing in Russia where present military activity and past military nuclear waste has resulted in large areas being off-limits for commercial purposes. The area available to cruise tourism in Russia is advantaged by robust infrastructure that supports the maritime sector in general. However, cruise tourism in Russia remains limited because of the aging fleet of cruise vessels in use, an inconsistent regulatory system, and competition from other polar cruising regions [9]. Development of the Russian Arctic National Park in 2009 has been an attraction to cruise vessels and more recently the protected area also attracts pleasure craft [10].

The ice regime in Arctic Canada has meant that until recently the region has not been reliably accessible for marine tourism. Changes in ice cover and distribution across the region have resulted in greater accessibility for all vessel types [11–13] and this has been particularly beneficial for Nunavut where the marine tourism sector has seen a relatively rapid increase in vessel numbers [14–16]. Pleasure craft, typically sailboats and motor yachts, are now the fastest growing shipping sector in Nunavut, while passenger vessels (both large and expedition cruise ships) are the fourth fastest growing sector in the region [16–18]. The Northwest Passage, known for its rich history and scenic beauty, has emerged as the most popular area to visit with transits increasing dramatically [18,19]. The greater accessibility of the Northwest Passage has meant more vessels are travelling into and through Nunavut; the discovery of the *Erebus* and the *Terror*, the two ships lost in the region during the 1845 Franklin Expedition, is a new factor increasing the draw for tourists and providing opportunities for the tourism industry [18].

Nunavut's position in the Canadian Arctic has meant that, of the three territories, it has seen the greatest growth in marine tourism, creating both challenges and opportunities for the territory, communities and businesses (Figure 1). There are distinct cultural and environmental attractions in Nunavut, but the vast geographic extent of the region is a disadvantage in terms of the provision of infrastructure and services needed in the development of the sector. In addition, there is a regulatory barrier across the various jurisdictions of the Canadian Arctic (the federal government, the territorial governments, provincial governments, and the Inuit and Inuvialuit organizations) that affects the development of cruise tourism particularly.



Figure 1. Map of Nunavut in the context of the Canadian Arctic.

There is hope that the increased activity will bring tourism benefits to Nunavut, but there is also concern about the risks involved. Researchers and government departments have described both the benefits (e.g., economic development, promotion of history and culture, community and infrastructure development) and the risks (e.g., human safety and security, environmental impacts, local costs) (see, for example, [15,19–24]).

Thus far, the region has a strong history of safe operations with only a few notable mishaps that include several ship groundings, requests for search and rescue assistance, and inappropriate or illegal behaviour of visitors [15,25–31], but the number of incidents is expected to increase as the numbers of vessels, voyages and passengers increase [32] and with new and/or unprepared entrants to the region [15,30]. Questions remain about the contribution of marine tourism to local economic development, especially given the capacity of cruise vessels to be completely self-contained [21,24,33]. The most recent Nunavut Tourism visitor exit survey [34] shows that, despite the high income of passengers and high prices paid for Arctic cruises and airfare, cruise visitors only spend an average of \$700 each on shore during their entire cruise. This echoes data presented by Maher [21] and by Nunavut Tourism [35] showing that cruise tourists to Nunavut spend less than \$50 CDN per day in Nunavut.

Despite the lack of visitor spending, the Government of Nunavut does want to develop marine tourism in an appropriate way, seeing the need for culturally-compatible economic development at a scale that is manageable in the small communities. The successful examples of cruise tourism development in Greenland, Iceland and Svalbard provide possible approaches, as do the best practices of sustainable tourism in other jurisdictions. Nunavut Territory is part way along its planning journey: it has a tourism strategy, a marine tourism management plan, an exit survey, a cruise readiness program, and the intent to resolve problems through cross-jurisdictional discussions. Nunavut is considering marine tourism management in an inclusive and integrated fashion, addressing both the cruise ship and pleasure craft categories together, an approach that has not been used until recently in the territory. At this point in its planning, Nunavut is seeking to develop effective management for the sector that both regulates and supports marine tourism development. This paper outlines current cruise and pleasure craft trends in Nunavut, describes the context, development, and strengths and weaknesses of the regional cruise management regime, and presents recommendations for enhancing the strategic management of the sector.

## 2. Growth in Marine Tourism

Marine tourism in Nunavut largely involves tourists travelling as cruise ship passengers or on small pleasure craft such as motor yachts and sail boats. Regulatory definitions help distinguish the two categories of vessels and these distinctions have important implications for management. Vessels with passengers who pay for their voyage fall into the commercial category, while non-commercial vessels carry no passengers, that is, the persons on board have not paid for or provided any remuneration for their transport. Both types of travellers are counted as tourists, though much emphasis has been on understanding the cruise segment, in particular, of the marine tourism industry in Nunavut. Those visitors travelling in pleasure craft might be termed “independent” travellers, while those on cruise ships might be termed commercial or package tourists. Both commercial and independent marine tourism involve the potential for positive and negative impacts in Nunavut, but they have different needs and ways of interacting with residents, communities, government agencies and the environment; consequently, there are different strategic challenges associated with each category.

Cruise tourism in Nunavut has followed the expedition cruising style popularized in the Antarctic by Lars-Eric Lindblad [22], which is founded upon exploration and education: “Experiences take three forms: using the ship as an observation platform (e.g., for whale watching), small boat cruising (e.g., along scenic coastlines, to view icebergs) and landings ashore. Throughout the cruises, both afloat and ashore, passengers are guided by experienced staff and naturalists, with lectures given en route between destinations. The guides also ensure visitors behave in a way that causes minimal or no disturbance to the natural environment” ([36], p. 106). Expedition cruising provides tourists with “off the beaten path” experiences in remote parts of the world that are often only accessible by sea [37,38]. These smaller ships do not require the infrastructure of conventional cruising such as docks and other facilities as shore access is typically by inflatable rubber boats [39].

Polar expedition cruise passengers generally are older in age, well-educated, well-travelled, in good health, and have successful careers or are retired; therefore, they usually have high levels of disposable income and time [21,22,40,41]. Expedition cruising, with its focus on adventure and education, appeals to these travellers, typically motivated by “finding new unspoilt, previously unvisited locations with a strong natural or cultural appeal” ([37], p. 251). Exit surveys undertaken of visitors in Nunavut confirm the typical polar expedition cruise demographic profile [34]: 90% are from Canada, the US and Europe, most are over age 65, 58% are female, and travel parties are often family and friend, and have an average size of 4 people. Cruise visitors are typically well-educated (60% have a graduate degree), and have a high household income (75% of respondents have a household income above \$100,000; 30% above \$200,000), yet the average spend on shore is only \$700.

Little is known about the demographic profile, spending patterns, and motivation of pleasure craft tourists in the region. Vessels range from small sailboats with two persons aboard to luxury yachts with more than 50 people aboard. Pleasure craft tourists set their own itineraries and have the capacity to access landings virtually anywhere in Nunavut. While cruise visits are concentrated at a moderate number of communities and desirable historic, cultural or landscape sites, pleasure craft visits are substantially more dispersed. This form of travel was limited in the past largely to niche adventurers attempting to reach untouched and untraversed seaways of the Canadian Arctic, but it has now evolved into a regular form of tourism to the region. Because the pleasure craft sector is new and dispersed, and because vessels fall below regulatory thresholds for mandatory reporting, very little is known about these tourists. It is likely that there are at least two distinct sets of travellers, based on the type of vessel used and the motivation to visit the region. The adventurers in sailboats are likely different in many ways from the wealthier individuals who travel in luxury yachts (see [1,2]).

Table 1 illustrates a decade of changing patterns in marine tourism in Nunavut from 2005 to 2015. The year 2005 marks the beginning of a stable cruise tourism industry in Nunavut. The number of vessels increased over the next three years and since has fluctuated between a low of 18 and a high of 30 vessels. In recent years, the size of cruise vessels has increased and thus the number of passengers arriving has also increased. The actual number of kilometers traveled by cruise ships has fluctuated over time, peaking in 2008 and 2010 with a slight decline in more recent years. Table 1 also shows the development in pleasure craft tourism, which has increased steadily over the same decade, reflecting the opening up of the Canadian Arctic as a new destination region for both luxury and adventure travellers ([15], see also [1]). Pleasure craft are now the fastest growing category of all ship types in the Canadian Arctic [15]. The westward shift in cruise ship activity noted by Stewart and Dawson [29] is mirrored in the spatial patterns of pleasure craft travel, reflecting enhanced accessibility of the Northwest Passage [15]. Although the actual number of vessels is low compared to other more southern cruising regions, the increase in kilometres traveled is particularly striking. The distance traveled by pleasure craft in kilometers increased by 148% during the 2010–2015 time period compared to 2005–2010 and current distances traveled are close to that of traditional cruise ships. Pleasure craft are also moving into more northerly parts of the region and average length of visit has increased dramatically [15].

The table data arise from advertised cruise itineraries and Canadian Coast Guard NORDREG, a database established through the vessel reporting system in Canada that is non-mandatory for pleasure craft and for cruise ships under 300 tonnes. It is likely that all cruise ships and most pleasure craft voluntarily report because this provides access to services (e.g., weather reports, SAR), but a degree of non-reporting does exist in the pleasure craft sector [15].

While marine tourism in Nunavut is comprised almost exclusively of expedition cruise tourism and pleasure craft tourism, the exceptions are quite noteworthy because they present distinct strategic management issues. For example, in 2016 the largest cruise ship to ever enter the Canadian Arctic sailed into Nunavut. The *Crystal Serenity*, a vessel ten stories high, traversed the Northwest Passage over 32 days, covering 7297 nautical miles and bringing more than 1000 guests and 600 crew to the

small hamlets of Cambridge Bay (population 1766) and Pond Inlet, Nunavut (population 1617). The luxury vessel is now becoming a regular in the region, with plans to visit again in summer 2017 [42,43].

**Table 1.** Passenger Vessel and Pleasure Craft Trends across Nunavut (2005–2015).

Year	Passenger Vessel Voyages	Estimated Number of Persons on Passenger Vessels	Kilometres Traveled	Pleasure Craft Voyages	Estimated Number of Persons on Pleasure Craft	Kilometres Traveled
2005	11	1045	69,621	9	25	9394
2006	23	2200	84,519	3	5	N/A
2007	24	2496	75,981	7	21	5757
2008	26	2962	85,973	7	21	22,871
2009	25	2738	59,225	12	70	26,475
2010	24	2628	87,704	11	103	25,749
2011	18	1890	43,728	20	104	44,754
2012	22	2582	33,503	26	175	51,510
2013	26	3002	62,673	23	152	54,048
2014	25	2880	62,557	30	240	72,569
2015	30	3680	68,127	21	139	54,068

Another large vessel that visited the region in 2012, the *World*, has proven hard to categorize using regulatory definitions. The *World* is a luxury condominium ship with 165 units on board valued at up to \$13 million each. The *World's* trip to Nunavut included disembarking its 508 passengers in two Nunavut communities to experience local culture [44].

The *Octopus*, categorized as a pleasure craft, is a super luxury yacht that can accommodate more than 50 guests. The vessel features a glass bottom swimming pool, cinema, recording studio, hangar for two helicopters, a submarine, wood burning fireplace, and full spa and exercise room. Owned by Microsoft co-founder Paul Allen, it has travelled in the Canadian Arctic on numerous occasions, often stopping in Pond Inlet, Nunavut to purchase supplies and make donations to the local visitor centre [45].

Overall, the marine tourism sector in Nunavut has been steadily growing since 2005 and is expected to continue to increase at least moderately into the future. The numbers of vessels in the region are much smaller than other popular Arctic cruising areas such as Svalbard, Norway, Iceland and Alaska. However, the territory of Nunavut in Arctic Canada is unique in its governance (settled land claim area combined with territorial and federal oversight) and thus warrants focused research and management attention.

### 3. Marine Tourism Management Context

As cruise tourism has grown in Nunavut, attention has been given to understanding the negative and positive aspects of this change from the perspectives of decision-makers, industry, the tourists themselves, and residents (e.g., [19,21,22,46–51]). One of the key areas of concern has been the challenges associated with the development of marine tourism policy and an appropriate management regime [18]. In particular, three areas of concern are significant: a complicated regulatory framework, a lack of data and monitoring capability, and insufficient control over tourist behaviour.

Concerns with the regulatory framework were identified in an exploration of cruise tourism policy needs in protected areas [23]. Stakeholders in the study were concerned about poor communication and industry fragmentation, and its effects on tourism development and control. The creation of a central organization to develop guidelines and represent the Arctic cruise industry was desired by the respondents in the study and, in particular, the International Association of Antarctica Tour Operators (IAATO) model of self-regulation was viewed as providing a good example that could be emulated in the Canadian Arctic. These themes were explored further in an analysis of cruise vessel governance in Arctic Canada [30]. This research highlighted the need for a dedicated authority to oversee management, to streamline licensing procedures and to develop guidelines and best practices.

A coordinated approach to effective governance would aid development by both controlling and supporting the growing cruise tourism industry.

Regulatory concerns also arose in research on cruise industry operator perspectives regarding decision-making and expectations about operations in Arctic Canada [49,50]. While operators were concerned about ice hazards and a lack of infrastructure, they were also concerned about additional costs incurred by operators related to following Canadian legislation and permitting. Lasserre and Têtu [50] concluded that growth in cruise tourism in the Canadian Arctic would be limited unless these regulatory challenges were addressed. The role of this barrier is further addressed by Dawson, Johnston & Stewart [18] who recommended that the overly complex system of permitting should be replaced with a streamlined and coordinated approach by government agencies and that more attention be paid to collecting appropriate data needed for decision-making. This reinforces the point made 10 years earlier by Marquez and Eagles [23] that a lack of data was hindering policy development.

The territorial approach to tourism is linked with a wide number of other bodies that, as a whole, provide the regulatory framework for marine tourism. Currently there is a multi-level framework for vessel traffic aimed at ensuring safe and secure operations that protect the natural environment, preserve local culture and traditions, and encourage economic development for the region. The general principle of the governance approach is to manage the cruising industry through both regulation and development support [30]. An overview of the regulatory and permitting process is outlined by Transport Canada in a document titled 'Guidelines for the Operation of Passenger Vessels in Canadian Arctic Waters' [52], currently under revision (see [18]).

Of particular note is the oversight and support provided by the Canadian Coast Guard. Vessels of 300 gross tonnage or more must register with NORDREG, the Canadian Coast Guard Marine Communications and Traffic Services, upon entering the Canadian Arctic and thereafter report their daily location in compliance with the zone date ice regime system. Further, operators of passenger vessels entering Canadian waters in Nunavut are required to arrange for and cover the costs of Canadian Border Services agents coming to the port of entry (typically Pond Inlet) in order for all passengers and crew to clear customs. For pleasure craft entering Canadian waters in Nunavut it is the responsibility of all persons on board to clear customs through the local Royal Canadian Mounted Police office.

Territorial specific regulations, licenses and operating permits include those related to doing business in Nunavut, as well as those established for environmental assessment through the Nunavut Impact Review Board, for supporting Inuit guides through the Inuit Heritage Trust, and those that are itinerary specific, such as permits to enter National or Territorial Parks. Permission is also required to access Inuit owned land. Pleasure craft operators are not required to seek permits related to commercial standards, expectations and responsibilities that are required for passenger vessels. An area of concern for both federal and territorial authorities is the possibility that commercial vessels with paying passengers are operating as pleasure craft, therein avoiding relevant regulation [15].

In addition to the complicated and multi-jurisdictional system of laws and permits, there is a concern that the current territorial licensing framework through the Department of Economic Development and Transportation does not sufficiently cover cruise vessels or smaller commercial craft. Neither of the two current licensing options is relevant for cruise operators. The tourist establishment licence had been in use until the Nunavut Department of Justice determined that the Government of Nunavut did not have the authority to use this licence to regulate cruise ships. More recently, the second licence has been used—the outfitter's licence. This licence is relevant for local tour operators engaging in marine based activities such as kayaking, fishing and canoeing, but the definitions of an outfitter might not apply to a cruise operator depending on how the cruise activities are taking place. This two-licence system in the *Travel and Tourism Act* originated in a largely land-based tourism context and no revisions have occurred to reflect the dramatic changes evident with increasing marine tourism. It is vital that the legislation and regulations that support licensing activities be revised to

accommodate the needs of a growing and changing marine tourism sector. Consultations have taken place on needed changes in this act, of which the licensing issue is a part [53].

That tourism has resided in the Department of Economic Development and Transportation relates to its being seen primarily in economic terms. While commercial marine tourism should be licensed in relation to economic development and/or economic impacts, this situation has meant that less attention has been paid to non-commercial forms of tourism such as pleasure craft tourism and to impacts of cruise tourism that are not economic in nature. The absence of reliable and consistent marine tourism data exacerbates the challenges associated with monitoring industry growth and fulfilling the territorial obligations to safeguard the region's natural environment and cultural heritage. It also makes it difficult to support the industry and to facilitate locally desired economic development pathways. Currently some effort is made to collect data through regular visitor exit surveys (conducted in 2006, 2008, 2011, and 2015) and through the permitting process [34,35,54]. However, neither system yields sufficient or reliable data for decision-making related to cruise and pleasure craft tourism. More effective systems for collecting tourism statistics on cruise tourism exists in other Polar destinations (see [55–57]). Where these data collection systems are built directly into tourism permitting and industry self-regulation procedures they are more effective. In these systems cruise operators are required to provide pre-trip information on the intended voyage, as well as post-trip information that identifies the location of all shore landings and number of passengers disembarking at those locations. The current pre/post-trip reporting forms in Nunavut for cruise vessels are focused on community disembarkations and on economic benefits, reflecting the mandate of that department [58], and so do not provide the complete record of disembarkations. Further, given the dispersed and unregulated nature of pleasure craft travel, there is little information about the activities of this sector other than what can be obtained through voluntary reporting of location or through examination of internet sites for particular voyages (see [59]). The increase in marine tourism leaves Nunavut Territory, its residents and its environment vulnerable to impacts without sufficient information to address problems. While control of cruise tourism is a regulatory and an industry responsibility, there is little oversight of the far more dispersed and independent pleasure craft now taking advantage of the increased access afforded by changes in the ice regime.

In an exploration of adaptation strategies for managing the increased tourism opportunities and risks in the context of climate change, Dawson, Stewart, Johnston and Lemieux [32] concluded that “there is a strong need for appropriate adaptation and management strategies to be implemented across Arctic Canada that allow local residents and regional communities to benefit from climate-induced development. Instead of passively observing economic change in the region, it is vital that development trajectories are directed via locally dictated desires and through evidence-based decision-making. Thus, policy- and management-focused research is necessary in order to better understand the particular adaptive strategies that are needed to ensure that a sustainable and desired tourism economy is facilitated in light of climate change.” (p. 15).

Though much of the research on marine tourism management has focused on cruise vessels, Johnston, Dawson, De Souza and Stewart [15] surveyed decision-makers and managers in industry and government in order to assess the management concerns related to pleasure craft tourism. They grouped these concerns related to pleasure craft growth as comprising four categories: visitor behaviour; services, facilities and infrastructure; control; and, planning and development. They recommended that research on the sector, the development of effective regulations, and a strategic approach to development be prioritized. While their research demonstrates some overlap with the concerns identified in relation to cruise tourism, distinctions are important and must be addressed in management.

In Nunavut, tourists are able to disembark at any location (assuming they have permits for certain protected sites, Inuit lands and permission from communities) and there are no official guidelines outlining appropriate visitor behavior. In 2012, the community of Pond Inlet created a code of conduct for visitors to the community. The Government of Nunavut is now adapting the Pond Inlet code

of conduct for visitors and has further developed other similar guidance documents including; a community code of conduct, an operator code of conduct, a visitor code of conduct and “do’s and don’ts” of guided tours. There are federal level wildlife viewing guidelines and some behaviour restrictions at National Wildlife Areas, for example; however, at the territorial level, guidelines that reflect the local expectations and culture desires are largely absent. Cruise operators tend to reinforce appropriate behaviour among their clients and several long-term operators voluntarily hire local guides on all voyages to assist in developing an understanding of culture, though there are no requirements to do so.

Given the interest by cruise operators in the “Lindblad approach,” many have taken on the idea of using education and interpretation, alongside staff observation and guidance of visitor behaviour. The Association of Arctic Expedition Cruise Operators (AECO) has industry guidelines that are now being used by some operators in Canada, and the guidelines of the Arctic Council’s Protection of the Arctic Marine Environment (PAME) working group developed through a multi-party approach could be used. Cruise visitors might be well-controlled through these means (see [21,22]), however, there is much concern about the activities of pleasure craft travellers and whether they pay attention to best practices, community desires regarding tourist behaviour, territorial and federal laws and common sense [15].

#### 4. Progress in Territorial Marine Tourism Management

Management of both cruise ship and pleasure craft tourism in Nunavut is now taking place within the context of a territorial Tourism Strategy and a marine tourism plan. In 2013, the Nunavut Department of Economic Development and Transportation (EDT) released *Tunnngasaiji: A Tourism Strategy for Nunavummiut*. The Tourism Strategy is intended to develop tourism in Nunavut for the benefit of the territory and its communities, while ensuring that the people of Nunavut, the wildlife, and the environment are respected and protected [20]. Though it covers all tourism development in the territory, it does contain specific references to marine tourism and includes the objective of developing and implementing a cruise ship and yacht management plan to help communities and businesses to participate in this emerging market. The resulting management plan itself “reflects the guiding objectives and desired outcomes of *Tunnngasaiji* and is based on further consultations with key stakeholders, input from legal advisors and other experts, and the programmatic knowledge of tourism staff within EDT” [60]. It was accepted by the territorial government and along with the Tourism Strategy now underpins support and control of marine tourism [18,59].

*Tunnngasaiji* identifies the success indicators/outcomes of the Cruise Ship and Yacht Management Plan as follows: increased income to communities through provision of services, sale of arts and crafts; improved relationships with communities from more effective management of cruise ships and yachts; greater awareness of cruise and yacht owners and operators of regulations and licensing requirements [20]. The creation of the marine tourism management plan represents an important foundational step toward providing support for communities and businesses to pursue their interests in the sector, while providing a stronger framework for the territory to address its service and control gaps. However, as climate change and other global factors influence additional growth in the marine tourism sector in Nunavut it is important that innovative and contextually specific strategic management approaches continue to be prioritized.

#### 5. Strengths and Weaknesses of the Management Regime

The effectiveness of management framework for marine tourism in Arctic regions can directly influence economic opportunities, safety and security, local culture, and environmental sustainability. The multi-level framework that exists in Nunavut has areas of strength but requires substantial improvement to ensure opportunities are realized and risks mitigated. Achieving management outcomes such as ensuring compliance with regulation, protecting the environment and encouraging economic development is very challenging in Nunavut given the size of the territory, the lack of



monitoring infrastructure and resources, and the variety of institutions and agency stakeholders involved in managing the industry.

Current areas of strength in Nunavut include: a strong set of regulations aimed at safeguarding the natural environment, wildlife, protected lands and cultural heritage; an increasing demand for cruising opportunities, especially through the Northwest Passage; an industry with several passenger ship operators with over two decades of experience safely navigating in Nunavut waters; a robust system for environmental assessment and protection including the Nunavut Impact Review Board, territorial and federal processes; and, the potential for a comprehensive approach to planning through the Nunavut Planning Commission. Further, the establishment of the Tourism Strategy and the marine tourism management plan provide the territory with the tools to support communities and groups that wish to pursue marine tourism in their economic development planning. An associated review of legislation and licensing practices has enabled the Department of Economic Development and Transportation of the Government of Nunavut to clarify its approach to regulation as it takes firmer control of this sector of tourism.

Significant weaknesses include: inappropriate territorial licensing system for cruise vessels and a complex system of inter-jurisdictional regulation; lack of enforcement capabilities in the region (and neighbouring regions); lack of tourism data needed for decision-making and industry support; a complicated permitting system; the lack of a single point of contact in the territory or communities; an absence of site guidelines for heavily used and/or significant locations; and, limited availability of codes of conduct for visitor behaviour.

The large number of government departments and agencies with a role to play in management demands a more coordinated approach than is currently in place and possibly the creation of a single point of authority in the region. Currently in Canada, each level of government, and the various departments and agencies within, is focused on its specific area of mandate (e.g., culture, environment, or transportation.), but not enough attention is given to the importance of integrating management efforts across scales and across mandated responsibilities. This has led to management gaps, oversights, and communication difficulties. Other polar regions are not immune to these issues, but in some cases a streamlined approach with a clear communication protocol has been successfully employed.

## 6. Discussion—Strategic Management Options

For Nunavut to take advantage of the increase in marine tourism through a strategic development agenda, it will need to address weaknesses in the current passenger vessel and pleasure craft governance regime. It is perhaps disheartening that many of the weaknesses apparent today were identified by Marquez and Eagles [23] a decade ago, but it is noteworthy that challenges in marine tourism development of the type and scale being experienced in Nunavut are similar to challenges experienced in other regions such as the Kimberley Coast in Australia [61], New Zealand's Fjordland [62,63] and the Russian Arctic [9]. The territorial Tourism Strategy, changes in legislation and the marine tourism management plan go a long way in resolving some of the identified problems. Yet several management approaches need to be pursued more aggressively to ensure that marine tourism does not harm Nunavut's environment, culture, heritage and the daily life of residents, and to make best use of the competitive advantage now held by Nunavut because of its geographic and political position in the Canadian Arctic. Several strategic approaches are discussed below: streamlining the provision of information and the industry permitting system; improving tracking of all tourism vessels and enhancing data collection; and, developing guidelines for highly visited and/or significant sites and for tourist behaviour.

### 6.1. Streamlining the Regulatory Framework

Cruise operators and pleasure craft travelers would greatly benefit from the consolidation of regulatory, management, and voluntary and interpretative information into one online location that serves to educate operators about the region, but also facilitates the mandatory regulation and

permitting requirements. Nunavut (and Arctic Canada) is known for its highly complex permitting process, which is currently curtailing the full potential of cruise tourism development in the region. Developing a two-way information exchange portal whereby operators can request permits, obtain interpretative and pertinent information from the region, and where the Government of Nunavut, its neighbouring jurisdictions, and the Inuit and Inuvialuit agencies can issue permits, provide updates, and gather industry data is a win-win situation for both operators and regulators/stewards of the region.

The complexity that exists within the passenger vessel regulatory system is currently limiting cruise tourism activity and local economic opportunities in Nunavut. Passenger vessel operators are required to obtain between 20 and 35 permits to operate in Nunavut, including permits required from federal agencies. This complexity is in direct contrast to the more streamlined systems that are in place in Antarctica and Svalbard that have a one-window approach to permitting based on the requirement for environmental review. The process will inevitably be more complex in Nunavut than in Antarctica or Svalbard where there are no or few human settlements; however, the one-window approach has the potential to improve the efficiency and effectiveness of management and help Nunavut meet its desired management outcomes [18].

The quickly growing pleasure craft sector requires a special management focus. As part of this effort, a first step should be a comprehensive information package available online that identifies requirements for safe operation, compliance with the rules, regulations and expectations of the territory, information on support systems, and other preparatory material about the Arctic environment also in a one-window approach. This portal can function as a marketing tool with links to relevant sources of information. Finally, partnering with existing cruise tourism organizations will further provide a resourcing benefit to Nunavut. This may be as simple as website linkages, but could also involve joint information campaigns and efforts to develop Nunavut-specific material. Given the limited resources available to support tourism development, it makes sense to use the networking capacity of AECO, its existing web presence, and its reach to European operators [64].

## 6.2. Improving Marine Tourism Data Collection and Analysis for Decision-Making

Given the high adaptability of tourism operators, who can easily change tour locations, timing, and activities based on rapid changes in global demand or social trends, it is vital that Nunavut has access to and fully utilizes accurate and reliable tourism data. Increased data availability is necessary in order to more fully understand tourism trends as well as economic impact and potential so that evidence-based decisions can be made. Extensive and longitudinal tourism data have been collected in Svalbard and Antarctica, becoming a foundation for management and investment decision-making. The dearth of data in Nunavut makes decision-making difficult—especially for an industry that is already extremely variable. Visitor exit surveys conducted by the territory in the past have established some understanding of the tourism market, but have been plagued by a limited sample size, geographical bias in the sampling methodology, and inconsistent and sometimes invalid survey instruments.

Limited effort has been made to understand the pleasure craft market in the region and very little is understood about the motivations, desires, satisfaction levels, and intentions of this growing market segment. In line with the Tourism Strategy, Nunavut should conduct specific, detailed surveys of each of these two market categories of tourists (cruise and pleasure craft) on a regular basis. Data obtained through exit surveys, specific market category surveys and licensing will provide valuable planning, decision-making and monitoring information to help with management through regulation and support. Furthermore, Nunavut could pursue efforts to have AIS (automatic information system) responders as mandatory equipment on all tourist vessels in its waters. Currently larger tourism vessels such as cruise ships are required to use AIS responders, but smaller vessels are not. Benefits of having these on all vessels (commercial and non-commercial, large and small) are related to safety and security, and an improvement to monitoring capability, but they would also provide an excellent source of data for understanding the changing temporal and spatial patterns of cruise and pleasure

craft tourists. This would require collaboration with federal agencies as requiring AIS Responders on vessels is within Transport Canada's jurisdiction.

### 6.3. Developing Site Guidelines and Behaviour Guidelines

There is need to improve site management in Nunavut. In Antarctica and Svalbard, site guidelines have been established and site vulnerability assessments are conducted at highly visited sites to monitor the environmental and cultural impacts of tourism and to provide interpretive and educational information to visitors [65,66]. This approach to both controlling and supporting marine tourism in Polar Regions has been very effective in remote Arctic areas where in-person monitoring capabilities are limited and expensive and should now be considered best practice. Further, site-specific guidelines provide an evidence-based approach to management that is an improvement upon relying on the precautionary principle [67]. Site guidelines typically include suggestions on how to conduct visits to locations; they provide pertinent and site-specific navigational details, as well as cultural, historic and environmental interpretive information and, further, they direct traffic to areas deemed suitable for visitation and, by default, steer visitors away from more sensitive areas.

Highly visited and/or significant sites across Nunavut should be identified and a series of site guidelines developed. The guidelines should include both interpretative/educational information as well as instructions for behavior and use and be integrated with any existing guidelines, for example, at protected sites. Existing guidelines from Antarctica and Svalbard can be used as a template and adapted for Nunavut. Although the vast majority of cruise and pleasure craft tourism is occurring in Nunavut it is recommended that there be consultation with Northwest Territories, Yukon Territory, Quebec and Newfoundland/Labrador to ensure that site guidelines are consistent across the Canadian north. It is further recommended that basic vulnerability assessments of each site be conducting including a benchmarking exercise so that impacts can be monitored over time. This should include an analysis of flora fauna, natural or cultural heritage, as well as aerial photographs. Monitoring and subsequent vulnerability assessment exercises should be conducted periodically (5 or 10 year intervals) in order to track impacts. A booklet of site guidelines should be available electronically through a variety of sources (e.g., Nunavut Tourism, Government of Nunavut, and AECO websites) with hard copies available for purchase.

To complement the site-specific guidelines, the code of conduct for visiting Pond Inlet should be adapted to a territorial scale and distributed as needed for use in Nunavut communities and on cruise vessels and pleasure craft. The development and/or adaptation of other codes of conduct should also be considered. For example, the AECO code of visitor conduct for Arctic regions or the World Wildlife Fund (WWF) codes of conduct for tourists and operators could be adapted for use in Nunavut. If it is not possible to legally require operators to have paid Inuit guides/interpreters on board vessels operating in Nunavut, then this should be included in a code of conduct and highly encouraged as a voluntary measure. It is also recommended that a series of wildlife viewing guidelines be established for the specific context of Nunavut and its regions.

## 7. Conclusions

Marine tourism across the global Arctic has been increasing in popularity over the past decade and growth in the sector is expected to continue. In Arctic Canada, the territory of Nunavut has experienced significant increases in cruise and pleasure craft traffic since 2005 when the region became more reliably accessible due to diminishing sea ice and increased access to the Northwest Passage. The increased opportunities for marine operations in Nunavut have led to a fleet of expedition cruise vessels and luxury yachts that return to the region regularly. Over the past five years Nunavut has also attracted larger cruise ships, atypical vessels such as the *World*, and an increasing number of smaller private motor yachts and sail boats.

Compared to other Arctic regions, Nunavut still attracts fewer vessels due to geography, remoteness from populated centres, and also because of a limiting management regime that has acted

as a deterrent to some polar operators. The purpose of this paper was to examine the management regime for marine tourism in Nunavut and to describe a set of strategic management suggestions that may enable the sector to develop in a way that balances regional imperatives related to the economy, society, and the environment. After reviewing the context and strengths and weaknesses of the existing cruise and yacht governance regime in Nunavut and Canada, recommendations for improving upon an already robust management system include; (1) streamlining the regulatory framework; (2) improving marine tourism data collection, and analysis for decision-making; and (3) developing site guidelines and behaviour guidelines.

The need to streamline the cruise tourism regulatory framework has been well-established by research within the academic and government. However, further work is needed to examine options for coordinating the multi-jurisdictional and multi-stakeholder mandates and interests, including how to ensure appropriate management of tourism activities alongside the broad environmental assessment and planning bodies in Nunavut. The urgent need to improve marine tourism data collection is required to bring the region up to date with other Arctic tourism regions that already collect key tourism statistics and to facilitate better decision-making in the region which is currently plagued by a lack of evidence-based information. Implementation of new cruise tourism data collection measures will not be difficult and could be facilitated through the current permitting system. However, enhancing data collection of pleasure craft visitors to Nunavut, who are not required to obtain permits, will continue to be challenging. Research needs to be undertaken to understand the actual activities and impacts on environment and wildlife of both cruise and pleasure craft tourists. Regarding the development of site and behavioural guidelines, a number of research needs exist. A comprehensive temporal and spatial analysis of tourism vessel trends in Nunavut is necessary to more fully understand where and when vessels visit communities and significant shore locations throughout the region. It will also be important to identify the locations where site guidelines should be developed because once guidelines are developed this will lead to focused visitation in these areas and, consequently, less visitation in other areas. It will also be important to work with all stakeholders to develop a cultural/environmental sensitivity index for the region so that appropriate sites can be chosen.

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