

Short Statement
Arctic Observing Summit 2016

Arctic Tourism Should be used as a Vehicle for Arctic Observing Systems

Kevin Hillmer-Pegram*(University of Alaska Fairbanks), Suzanne de la Barre (Vancouver Island University), Patrick Maher (Cape Breton University), Jackie Dawson (University of Ottawa), Edward Huijbens (University of Akureyri), Machiel Lamers (Wageningen University), Daniela Liggett (University of Canterbury), Dieter Müller (Umeå University), Albina Pashkevich (Dalarna University), Emma Stewart (Lincoln University)

*Corresponding Author: khillmerpegram@alaska.edu

Overview

In this short statement, members of the International Polar Tourism Research Network (IPTRN) contend that Arctic tourism should be used as a vehicle for Arctic Observing Systems (AOS). Ship, airplane, and land-based Arctic tourism regularly brings observational capacity into settings that may remain otherwise unobservable, but scientists and other concerned stakeholders have not fully capitalized on this opportunity to date.

The assertion presented here is based on an article currently in publication with *Polar Research* (de la Barre et. al, Forthcoming), wherein the same authors examine the two-way relationship between Arctic tourism and AOS. The two-way relationship describes both the untapped opportunity provided by tourism to facilitate AOS, but also the need to make tourism's environmental and social impacts a key area of study for AOS – since tourism is increasing across the Arctic and predicted to continue doing so as decreasing sea ice as a result of climate change, *inter alia*, enables spatially or temporally extended marine access (e.g., Fay & Karlsdóttir, 2011; AMSA, 2009).

While the need to monitor Arctic tourism's impacts is widely accepted, ways in which tourism can play a positive role in AOS have so far not been explored nor highlighted sufficiently. This short statement demonstrates existing and potential contributions made by tourism to AOS and reviews key questions requiring attention in order to move forward.

Contributions of Arctic Tourism to AOS

De la Barre et al., (forthcoming) provide a survey of the relationship between tourism and AOS in Alaska, Arctic Canada, Iceland, Svalbard, mainland European Arctic, Russia, and Antarctica. They discuss their findings in regard to existing contributions:

There already exist examples of tourism operations that offer additional monitoring and observation opportunities...Four examples are briefly presented...: (1) The Whales and Glacier Science Adventure ship-based tour that forms part of a community-based monitoring effort in Alaska and focuses on sampling phytoplankton, testing water quality, and collecting data on humpback whales; (2) The Churchill Centre for Northern Studies and Earthwatch's 'Climate Change at Arctic's Edge' in Canada which incorporates bird counts and plant species documentation; (3) the cruise tourism sector collaboration with the Norwegian Polar Institute which supplies data to the Svalbard

Marine Mammal Sighting Database; and (4) the International Polar Year's (IPY) 'Aliens in Antarctica' programme, as well as the International Association of Antarctica Tour Operators (IAATO) and Antarctic Treaty System (ATS) post-visitation reports that provide data on unusual observations (e.g., high mortality events of wildlife).

Tourism is therefore already contributing to AOS, but the efforts are dispersed over space and time, and uncoordinated across regions and scientific disciplines. Data verification is of the utmost importance when tourists contribute scientific observations, and can be promoted by having trained scientists oversee processes of data collection and reporting. Moreover, tour guides can be trained to serve as observers and supervisors of tourists' observations.

The article this short statement draws from develops the tourism component of a White Paper submitted to the Arctic Observing Summit 2013 (Keskitalo et al., 2013), which focuses on stakeholder participation in science more broadly. Many of tourism's contributions to AOS operate under a citizen-science model and advance the goal of integrating stakeholders into monitoring and knowledge production. When the citizen-science model is applied in the Arctic, the observational contributions of residents of the Arctic are key, and can be supplemented by observations from visitors to the region.

In addition to achieving citizen-science goals, tourism can contribute to AOS by financing scientists' research. Accepted practice at the Great Barrier Reef, for example, is a case in point. Here, tourists and marine biologists go out on the same boat to interact with whales and the tourists pay for the entire venture. A similar case exists in Iceland, where marine biologists use whale watching boats for data gathering (Bertulli et al., 2015). Perhaps scientists in the Arctic would tolerate the presence of tourists on their expeditions if the tourists paid for the trip.

Key Questions Moving Forward

De la Barre et al. (forthcoming) identify a series of questions that must be addressed to advance the integration of tourism and AOS. These include:

- How can we determine what the mechanisms are for the coordination of support, implementation, and operation of a[n] [AOS] which involves tourism as a data collection actor?
- [Could] a tourism-integrated [AOS]...fall under...the Arctic Council, particularly if these were designed to include community-based and citizen science approaches?
- How do we integrate tourism into extensive monitoring systems that already exist?
- What type of tourism stakeholder perspectives need to be included?
- [W]hile citizen science is potentially empowering and inclusive, how do we heed cautionary deconstructions of science executed in the north (and post and neo colonial interpretations and narratives of phenomena, e.g., climate change) to ensure colonial legacies are challenged and empowered Indigenous futures are supported?

Conclusion

Clearly, we – members of the International Polar Tourism Research Network – do not possess all of the answers at this time, but we are working on addressing them through our ongoing research. The purpose of this short statement is to propose the value of using tourism in the

Arctic as a vehicle for AOS, demonstrate how this is already occurring, and consider ideas for further integration. The rate and impact of change in the Arctic means that AOS efforts should utilize every resource available, including tourism, which brings knowledgeable and observationally inclined individuals into sparsely populated reaches of the world.

References

- AMSA (2009) Arctic Marine Shipping Assessment 2009 Report. Arctic Council. Retrieved from <http://www.pame.is/amsa/amsa-2009-report>
- de la Barre, S., P. Maher, J. Dawson, K. Hillmer-Pegram, E. Huijbens, M. Lamers, D. Liggett, D. Müller, A. Pashkevich & E. Stewart (forthcoming) Tourism and Arctic Observation Systems: Exploring the Relationships. *Polar Research*.
- Bertulli, C., Rasmussen, M. & M. Rosso. (2015) An assessment of the natural marking patterns used for photo-identification of common minke whales and white-beaked dolphins in Icelandic waters. *Journal of the Marine Biological Association of the United Kingdom*. doi:10.1017/S0025315415000284
- Fay, G. & A. Karlsdóttir (2011) Social indicators for Arctic tourism: observing trends and assessing data. *Polar Geography*, 34, 63-86.
- Keskitalo, C., D. Müller, K. Bergh, K. Gerda, T. Söderqvist, and S. Sörlin. (2013). Stakeholder integration: a response to a suggested focus on Arctic residents and monitoring. Arctic Observation Summit, Vancouver. Retrieved from: http://www.arcticobservingsummit.org/users/white_papers.php