

Antarctic Sustainability: Regulations and measures from IAATO and Expedition Cruise Operator

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Keywords: Antarctica, Sustainable Tourism, IAATO, Expedition, Cruise

Abstract: With a growing number of visitors travelling to Antarctica and diversified tour activities conducted there, many environmentalists, academics and insiders have begun to concern about Antarctic sustainability. This article will introduce existing measures and regulations for the sustainability in Antarctic tourism in recent years from International Association of Antarctica Tour Operators (IAATO) and expedition cruise operators.

1. Introduction

Since 1958, the human being began to step into Antarctica Continent, as following, Antarctic Treaty was signed in 1959 to regulate the human activities in Antarctica. With the steady development of Antarctic tourism at the end of last century, International Association of Antarctica Tour Operators (IAATO), which was founded in 1991 by seven operators with a mission to advocate and promote the practice of safe and environmentally responsible Antarctic travel (IAATO 2018).

The number of visitors to Antarctica has been rapidly increasing year by year in the past decades, there is no doubt that Antarctica tourism is a booming industry, especially trips with expedition cruises (Figure 1). However, the global environmental impact of Antarctic tourism is still a controversial issue that is being currently debated (RAMON FARRENY et al, 2011), with more and more tourism activities conducted in Antarctica.

Officially, IAATO operators play an important role in advancing Antarctic science given the logistical challenges of operating in the region. In order to protect Antarctica, IAATO has made a lot of regulations to manage the industry, its members including Antarctic cruise operators also highlight education as a component of visiting Antarctica, enabling visitors to learn about this unique, natural environment and its value to global science.

Sustainability indeed plays a crucial role in Antarctic tourism industry, no matter for IAATO or cruise operators. Thus, this article will introduce some regulations and measures during the operation of Antarctic tourism based on information collected from IAATO and first-hand materials provided by a selected expedition cruise operator, to raise the awareness of Antarctica protection.

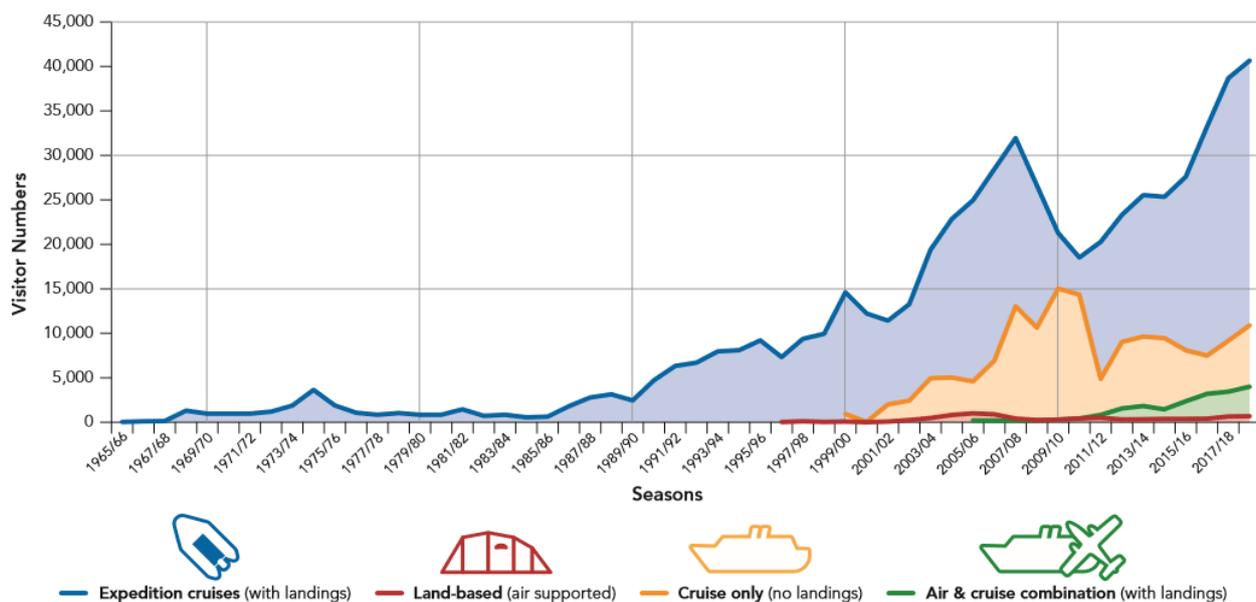


Figure. 1 Visitors with different ways of exploring Antarctica from 1965 to 2018

2. Materials Review

2.1 IAATO: the necessity of sustainable regulations in Antarctic tourism

Based on IAATO's vision, through self-regulation, Antarctic tourism is a sustainable and safe activity that causes no more than a minor or transitory impact on the environment and creates a corps of ambassadors for the continued protection of Antarctica (IAATO, 2019). To fulfill IAATO's mission of safe and responsible Antarctic travel, some regulations and measures are made and enforced.

In the first place, in order to promote effective visitor management, IAATO annually shares detailed information on its activities with Antarctic Treaty Parties and works collaboratively with scientific institutions, particularly on long-term environmental monitoring and citizen-science systematic observations (IAATO, 2019). As for private-sector trips, IAATO Launched an APP called IAATO Polar Guide which provides Antarctic Treaty System information for all Antarctic professionals and visitors. Also, "care and concern" policies were introduced to help field staff and visitors report any operation may have negative effects on Antarctica.

Moreover, it is known that Antarctic tourism mainly based on cruise tours, so the impacts from vessel-based operations are considered by IAATO. Some key methods were developed to reduce possible impacts from vessel-based operations including: Prohibiting vessels carrying more than 500 passengers from making landings in Antarctica; Requiring that tour operators coordinate their itineraries so that no more than one vessel visits a landing site at any one time; Permitting no more than 100 passengers ashore at one time; with a guide to staff ratio of no more than 1: 20 (IAATO, 2018).

In addition, to support science research, IAATO vessels routinely share this information collected as part their everyday operations, with the International Hydrographic Organization's (IHO) Hydrographic Commission on Antarctica to improve navigation since hydrographic surveying in Antarctica is difficult and expensive.

More importantly, IAATO will attend Antarctic Treaty Consultative Meeting (ATCM) each year

with invited expert delegation together, to develop site guidelines for the most visited sites in Antarctica and general codes of conduct including guidelines from six aspects:

Protecting Antarctic Wildlife, Respecting Protected Areas, Respecting Scientific Research, Keeping Antarctica Pristine, Being Safe, Landing and Transport Requirements.

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2.2 Expedition Cruise Operator: What measures have been taken for the Antarctic sustainability?

As for expedition cruise operators, most of them have raised the awareness of sustainability in Antarctica. The author, is a founder of a polar tourism agency called Kool Wayfarers who can gain very precious first-hand materials from some cruise operators. Some information revealed in this article will show that sustainable measures have been taken to protect Antarctic environment during tourism activities.

A professional Antarctic expedition cruise operator called Polar Latitudes is invited to share its sustainable measures during cruise tours in this article.

Polar Latitudes is a professional and environmentally-friendly Antarctica adventure company, it was founded in 2010. Polar Latitudes has been put efforts into the environmental conservation of Antarctica for ten years, and applies sustainable measures into their ship operation via multiple ways (Figure 2).

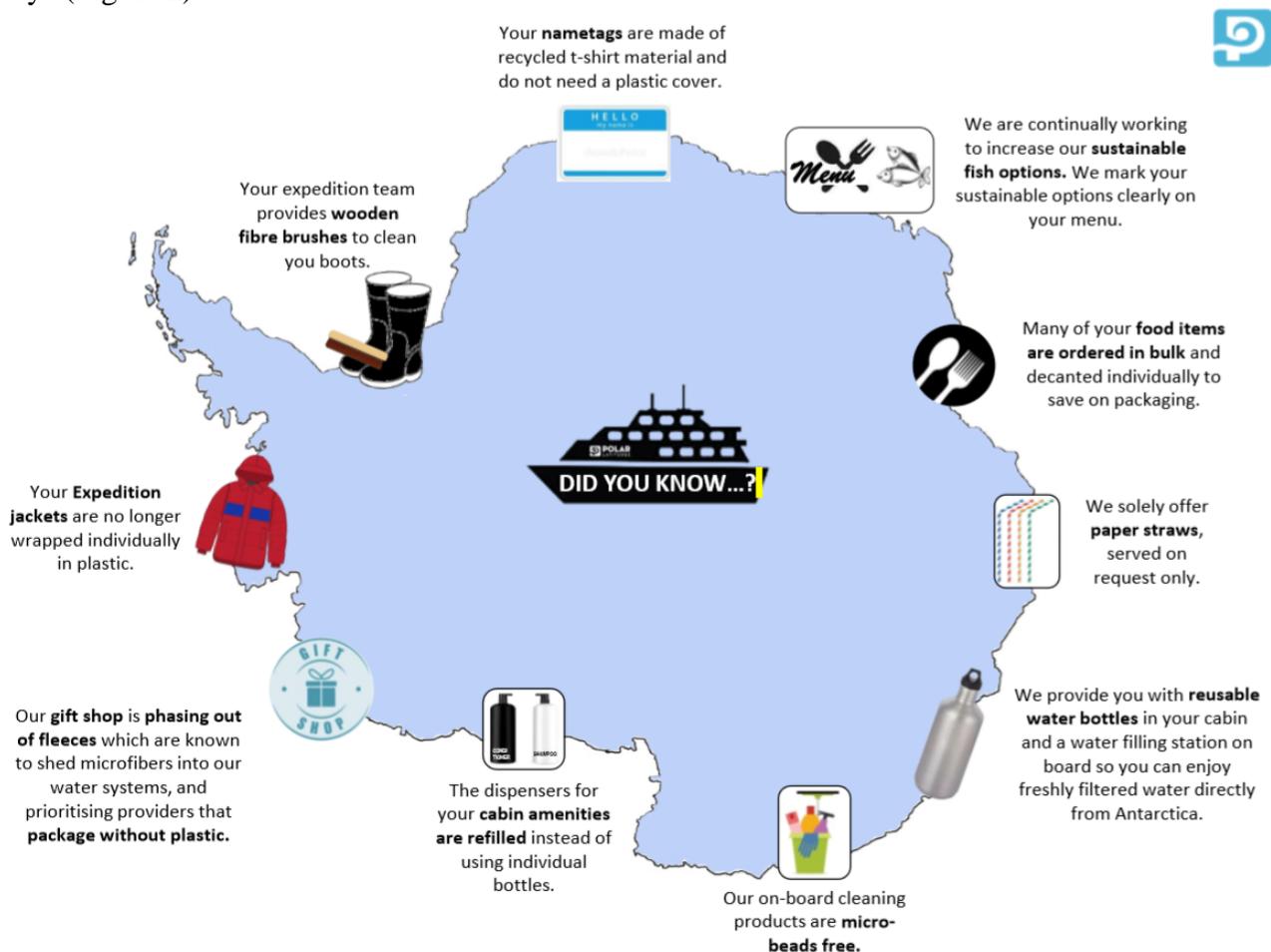


Figure. 2 Sustainable measures taken in the ship of Polar Latitudes

Furthermore, it coordinates with important research organizations such as NASA, Scripps and Woods Hole, helping to collect significant data of climate change, marine organism and wild animals for related science researches.

It is worthy to mention the “Citizen Science Program” of Polar Latitudes, which is complimentary and open to every guest on board who wants to help them with real-world scientific research, based on their official information, there are a number of projects guests can participate in various categories as below:

1. Phytoplankton studies for the Scripps Institution of Oceanography to map the health of the Antarctic Biosphere.

2. Penguin surveys for Dr Heather Lynch at Stony Brook University

3. Mapping cloud patterns for NASA's Globe Observer to track changes in clouds in support of climate research.

4. Salp Project for the Alfred Wegener Institute for the tracking of the increase in salp levels at landing sites

5. Photographing and identifying whales using Happywhale (<https://happywhale.com>) to track the migratory and feeding patterns of whales worldwide.

More preciously, Polar Latitudes holds charity auctions almost on each voyage, and continually gives away what they gain during auctions, all donations go towards NGO and science research organizations for environmental protection. In 2018 alone, Polar Latitudes raised over \$60,000 through activities like onboard auctions and sponsorship of the annual Falkstock music festival in Stanley, Polar Latitudes makes it a priority to support the organizations that support Antarctica (Polar Latitudes, 2020).

It is believed that Polar Latitudes and other Antarctica expedition cruise operators will do more for the sustainable tourism system, with their continuous conservation actions.

3. Conclusion

In conclusion, no matter International Association of Antarctica Tour Operators (IAATO) or expedition cruise operators, it is obviously that both are acting to protect Antarctic environment during tourism operation and management. Visible measures as mentioned in this article and they have contributed to the sustainability in Antarctic tourism in the past years. However, it is still necessary to think about that what actually is the definition of Antarctic sustainable tourism and how to develop it efficiently, since the conception is still not clear enough. The author, and other polar tourism operators are looking forward to find out the way for the real sustainability in Antarctica.

Acknowledgements

The authors gratefully acknowledge the first-hand sources from Polar Latitudes.

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