

Dear all,

We want to thank you very much for attending our virtual tour today. We loved sharing our beloved Antarctica with you and hope you enjoyed it as much as we did.

For those of you who have been caught in the Antarctic spirit like us, we share with you some links of interest, PDF files, books and movies suggestions to go deeper into the subject.

Stay safe!

Kind regards,

Laura & Carlos

LINKS:

- IAATO Guidelines: <https://iaato.org/wp-content/uploads/2020/04/IAATO-GUIDELINES-2014-15.mp4>
- US Antarctic program news website; maybe you know it but we find it very interesting: <https://antarcticsun.usap.gov/>
- US National Ice Center: <https://usicecenter.gov/>
- The guy who counted the penguins:
<https://www.usatoday.com/story/tech/sciencefair/2017/04/25/brrrd-count-penguin-population-antarctica-12-million-report-says/100839574/>
- Iceberg a86 latest news: [A68: Iceberg that became a social media star melts away - BBC News](#)
- If you have children in your family, you can keep this with you until you can see them again and work together on drawing a penguin: <https://bizimtube.com/how-to-draw-a-cartoon-penguin/>

MOVIE/ DOCUMENTARY:

- ❖ Shackleton – Starring Kenneth Branagh
- ❖ Our Planet | Frozen Worlds| Netflix

BOOKS:

- ❖ South (Shackleton)
- ❖ A voyage to Antarctica – field guide (49southphoto)
- ❖ The Storied Ice: Exploration, Discovery, and Adventure in Antarctica's Peninsula Region (Joan N. Boothe)
- ❖ Antarctica: A Guide to the Wildlife (Tony Soper)

ANTARCTICA

History of Discovery

2020 marks 200 years since the first sighting of the Antarctic continent in 1820. To celebrate this momentous occasion, we've highlighted some of the most significant historical moments since the discovery of Antarctica.

1820

First sighting of the Antarctic continent

As early explorers searched for new land by sea, and whalers roamed the Southern Ocean, the Antarctic continent was sighted as a distinct continent for the first time.

1898 - 1922

Heroic Age of Antarctic Exploration

The race to explore Antarctica's vast wilderness became a matter of national importance and countries competed to complete each 'first' in Antarctic exploration. Roald Amundsen ultimately led the first expedition to reach the Geographic South Pole in 1911.

1955-56

First female scientist worked in Antarctica

Women had only seen Antarctica from the decks of ships until, in 1935, Caroline Mikkleson became the first woman to set foot on an Antarctic island and, in 1937, Ingrid Christensen and colleagues, on the continent itself. Renowned Marine Geologist, Professor Maria Klenova was the first woman to complete scientific work in her own discipline in Antarctica in 1955, only one year prior to the creation of the first International Geophysical Year.

1959

Signing of the Antarctic Treaty

On December 1st 1959, 12 nations came together to sign an unparalleled system of international governance, the historic Antarctic Treaty. Supplemented by the 1991 Protocol on Environmental Protection to the Antarctic Treaty, Antarctica was designated a "natural reserve, devoted to peace and science".

1991

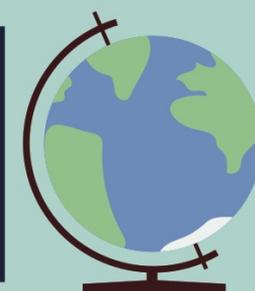
Formation of IAATO

It was in support of the Treaty's unique mission that IAATO was founded by seven operators to commit the Antarctic travel industry to the preservation of the region. Since 1991, IAATO has been advocating safe and environmentally responsible travel to Antarctica to make sure that their activities have no more than a minor or transitory impact on the region.

2020

200 years since Antarctica's discovery

The Antarctic Treaty System now encompasses more than 50 nations, approximately two-thirds of the world's population, and continues to provide protection for the white continent, while IAATO, now a member organization of more than 100 companies, remains committed to Antarctica's preservation and the education of new Antarctic Ambassadors.





The International Association of Antarctica Tour Operators (IAATO)

Tourism in Antarctica, 2019

Antarctica

Visitors have been experiencing Antarctica's natural splendour through organised tours for 60 years. Tourism, like scientific research and fishing, is managed through the Antarctic Treaty's unique global partnership that has governed Antarctica for more than a half-century and puts all territorial claims on hold. The entire continent is declared a natural reserve, devoted to peace and science (www.ats.aq).

The International Association of Antarctica Tour Operators (IAATO)

By 1990, there were seven tour operators active in Antarctica. It became evident that they would all benefit by setting aside competitive practices to coordinate with each other, especially in the areas of ship scheduling, safety and environmental protection. It was agreed that the operators would work together for the long-term protection of Antarctica, provide expert advice to Treaty Parties and meet client aspirations. On this basis, IAATO was formed in 1991 with a mission to advocate and promote the practice of safe, environmentally responsible private-sector travel to the Antarctic. Since that time thousands of visitors have experienced the natural wonders of the continent while leaving little or no trace of their visits.

IAATO's Vision

"Through self-regulation, Antarctic tourism is a sustainable, 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."

What is IAATO?

Today the large majority of all tour operators operating in Antarctica are members of IAATO, including all commercial SOLAS passenger ship operators. The association's membership comprises over 100 companies and organizations from all over the world. IAATO operators organize and conduct expeditions to Antarctica. They plan their activities to have no more than a minor or transitory impact on the environment, working within the Antarctic Treaty System (ATS) framework to obtain a permit to operate. Not all Treaty Parties have ratified the ATS Environmental Protocol, so IAATO has endeavoured to fill any loopholes by requiring its member operators to supply Environmental Impact Assessments, even if their national authority does not request them.

IAATO membership categories also include Provisional Operators, who are in the process of demonstrating membership requirements to become operators; and Associate Members, which include companies booking onto IAATO Operator's Antarctic programmes, ship agents, conservation groups and others who wish to support IAATO's mission and vision.

The work of IAATO is facilitated by a Secretariat of eight employees; and supported by nine thematic committees and seven working groups covering strategic planning, field operations, marine and environmental issues, compliance and dispute resolution, plastic elimination, external stakeholder engagement, tourism growth, education and outreach.



Fulfilling IAATO's mission of safe, responsible Antarctic travel

Collaboration

The future protection of Antarctica from the impacts of human activity requires careful management and collaboration on a global scale. 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.

To promote safe, responsible private-sector travel, IAATO:

- Assesses tourism trends, identifies areas for research and tackles challenges proactively, often in collaboration with members of the Antarctic community;
- Works with governments on many different national and international platforms to support responsible management and regulation of Antarctic tourism;
- Regularly reviews and develops guidelines, codes of conduct and procedures to safeguard Antarctica and its wildlife. These include standards for wildlife watching, protecting specific sites, waste management, banning the recreational use of Remotely Piloted Aircraft Systems (RPAS), preventing the introduction of non-native species and more;
- Implements a mandatory scheme of periodic observations of all IAATO member operations;
- Uses a bespoke web-based ship scheduling database system to help operators plan their itineraries before and during each field season and abide by IAATO and Treaty System requirements;
- Is supporting the development of a Systematic Conservation Plan for the Antarctic Peninsula, led by the Scientific Committee on Antarctic Research (www.scar.org);
- Launched the *IAATO Polar Guide: Antarctica App* for iOS and Android. This freely downloadable app works offline providing a "one stop shop" of IAATO and Antarctic Treaty System information for all Antarctic professionals and visitors;
- Introduced "care and concern" policies to help field staff and visitors report any operation they feel has fallen short of Antarctic Treaty and/or IAATO requirements;
- Raises visitor awareness of their obligations in Antarctica through comprehensive briefings and instructional video shorts in multiple languages;
- Uses a web-based IAATO vessel tracking system that is shared with the five Maritime Rescue Coordination Centres covering the Southern Ocean, to enhance Search and Rescue capabilities;

IAATO and the Antarctic Treaty System (www.ats.aq)

IAATO attends the Antarctic Treaty Consultative Meeting (ATCM) each year with an *Invited Expert* delegation. Together, Treaty Parties and IAATO have developed site guidelines for the most visited sites in Antarctica and general codes of conduct including guidelines for:



Protecting Antarctic Wildlife



Respecting Protected Areas



Respecting Scientific Research



Keeping Antarctica Pristine



Being Safe



Landing and Transport Requirements

- Promotes excellence in guiding by providing an online Field Staff Assessment and Certification Programme;
- Remains actively involved in the ongoing implementation of the IMO Polar Code;
- Participates as *invited observers* in COMNAP meetings to liaise with National Antarctic Programmes; including offering a COMNAP/IAATO fellowship scheme.

Impacts from Vessel-based Operations

Key methods developed by IAATO to reduce possible impacts from vessel-based operations include:

- Creating a cruise only segment by 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 passenger ratio of no more than 1:20.

These standard operating procedures have been incorporated into Antarctic Treaty Consultative Meeting *Measure 15 (2009): Landing of Persons from Passenger Vessels in the Antarctic Treaty Area*.



See <https://iaato.org/current-iaato-information-papers>



Bryan and Cherry Alexander/ALE

Supporting science

During the 2018–2019 season, IAATO Operators cost-effectively or freely transported 133 support, conservation and scientific staff - and their equipment and supplies - between stations, field sites and gateway ports. The support included data collection for research programmes.

Many Antarctic visitors are offered the opportunity to participate in citizen science, which is the practice of involving members of the public in scientific projects. It is a powerful tool for building scientific knowledge, public engagement and education. See examples of citizen science in action by visiting www.happywhale.com or www.penguinwatch.org.

To improve navigation in Antarctica where surveying is difficult and expensive, IAATO participates in the crowdsourcing of OLEX bathymetric information for hydrographic offices and research groups; including providing substantial data to the International Hydrographic Organization (IHO).

Eliminating plastics

IAATO is acting to reduce and eliminate the use of single-use plastics and microplastics across the industry, in collaboration with its sister association in the Arctic, the Association of Arctic Expedition Cruise Operators (AECO). Solutions are being developed, raising awareness through partnerships with high profile campaigns including the UNEP CleanSeas initiative, undertaking beach clean ups and participating in research to understand the scale of the problem in the polar regions.

Creating Antarctic Ambassadors

Tourism is, and should continue to be, a driving force in conservation. First-hand travel experiences lead to a better understanding of the destination, the need for responsible tourism and, ultimately, continued protection. IAATO members highlight education as a component of visiting Antarctica, enabling visitors to learn about this unique environment and its value to global science. Visitors travelling with IAATO operators – representing more than 100 different nationalities on average per season – return home as ambassadors for the Continent’s continued conservation.

Are you an Antarctic Ambassador?

Join the conversation:



AntarcticAmbassadors



@ANT_Ambassadors



#Antarctic_Ambassadors

#LoveAntarctica

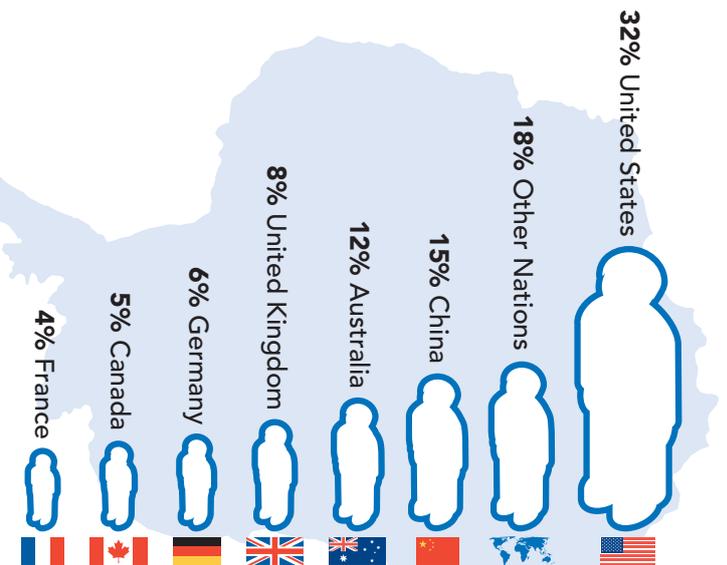


Where do Antarctic visitors come from?

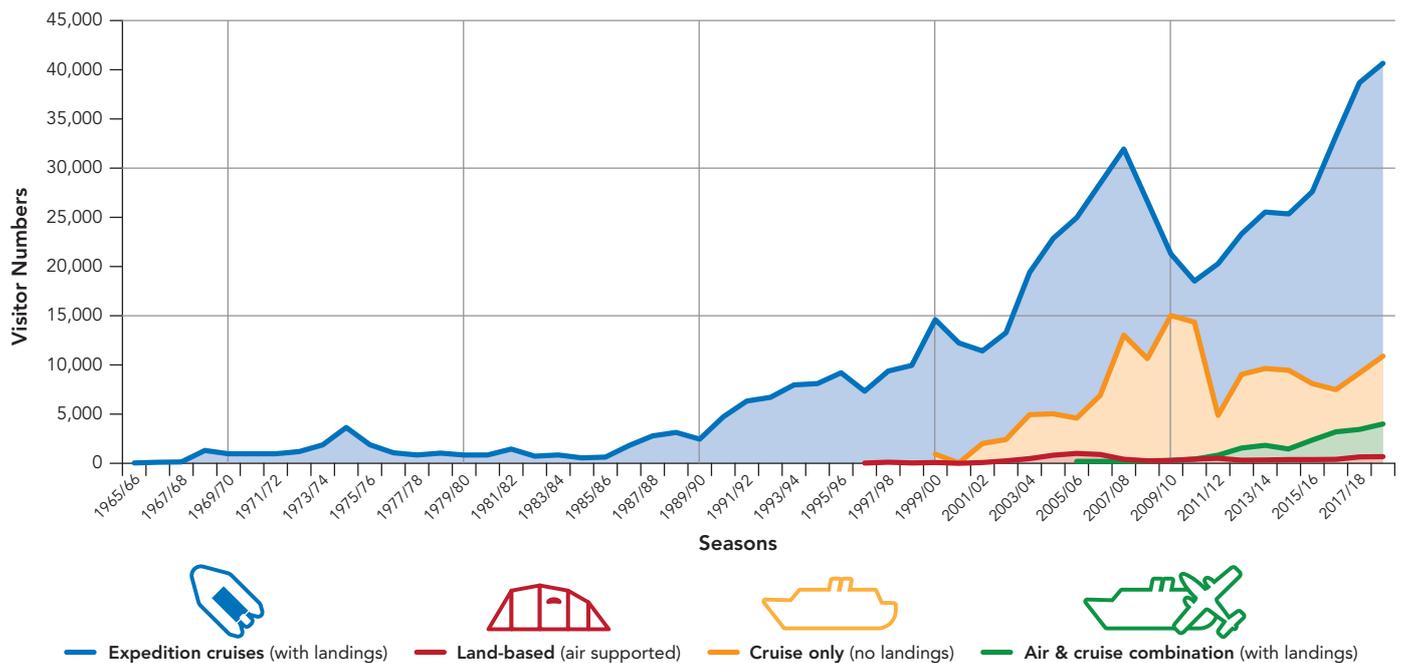
Traditionally most Antarctic travellers have been from North America and other english-speaking countries, however there are increasing numbers visiting from emerging markets such as China. Visitor demographics are heavily influenced by global socio-economic factors.

Trends

Nearly all visitors travelling to the Antarctic with IAATO operators arrive by sea from Chile or Argentina. A limited number depart from New Zealand or Australia. Some fly from South America to the northern Antarctic Peninsula where they embark on a ship for onward cruising. Around 1% of all annual visitors fly to experience the interior of Antarctica from South America or South Africa where they stay



in field camps. In the 2007-2008 season there was a peak in visitors (46,265) followed by a sharp decline due to the world economic crisis. The industry began to recover after 2011 and reached a new peak of 56,168 visitors in 2018-2019 with the greatest proportion of growth in the cruise only market and to a slightly lesser extent in the expedition cruise market.



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Don't Pack a Pest!

Non-native species in Antarctica

Non-native species are those species that do not naturally occur in an area and have been introduced either intentionally or unintentionally. A wide range of non-native species now occur in Antarctica and the sub-Antarctic islands. These introduced species include microbes, algae, fungi, vascular plants, invertebrates, fish, birds and mammals.

Be a Responsible Visitor

Despite known introductions of non-native species, Antarctica remains a relatively pristine environment. Human activity has the potential to act as a vector for non-native species. Across the continent, science programs and tour operators are working to minimize the risk of humans being a vector for transporting non-native species into and within the Antarctic.



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Still at home?

How to help before you head south

Clean and examine clothes thoroughly: Examine all clothing, including pockets, seams, Velcro® fasteners, and boot soles for dirt and organic material. A thorough cleaning is recommended.

Pack clean gear: Make sure your gear and outdoor equipment are freshly cleaned and free of dirt and organic material. Even if your gear is still dirty from a previous trip to the Antarctic, you could be transporting a non-native species.

How might non-native species hitch a ride with you?

- Boots and shoes
- Trouser hems and turn-ups
- Pockets
- Velcro® and fleece
- Backpacks
- Outdoor equipment, camera bags
- Walking sticks, tripods

Once you have arrived

Five steps to protecting the Antarctic

- 1 Follow the boot and clothing decontamination procedures** on your expedition. This is especially important if you are moving between distinct geographic regions (e.g. between a sub-Antarctic Island and the Antarctic) but also if moving between distinct landing or field sites.
- 2 Watch your step.** Be careful when walking in areas that contain organic matter as this can be easily transported to other areas. If you do notice organic matter on boots, clothing or gear, make sure to clean it off before leaving a site and use the disinfectant wash between visits.
- 3 Clean your gear regularly.** This includes boots, equipment, day packs and camera bags, trouser hems and turn-ups, fleece clothing Velcro® fasteners for outer clothing, etc.

- 4 Report a pest.** Tell your guides if you think you have found a non-native species.
- 5 Spread the word.** Share this information with others.
We all contribute to the health of the Antarctic.



Lessons learned for Antarctica from the sub-Antarctic



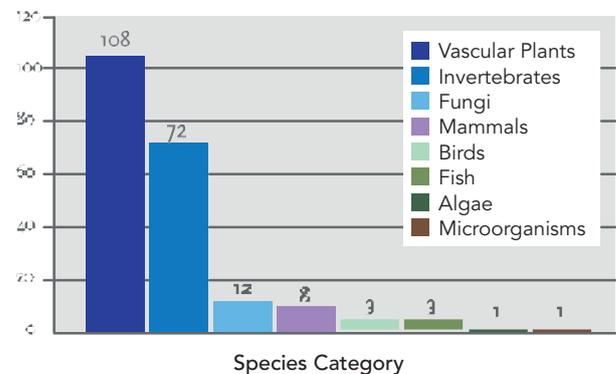
Human activities in the sub-Antarctic islands have contributed to a large number of introductions of non-native species both intentional (rabbits and reindeer for food) and unintentional (mice, rats, worms and grasses). Approximately 200 non-native species exist on the islands (see Figure 1).

These species have come to survive in – and in some cases dominate – terrestrial, freshwater and marine habitats, often causing alterations to the ecosystems through extinction or decreased abundance of native species.

What types of non-native species have already arrived in Antarctica?

- seeds
- fruit flies
- midges
- grasses
- worms
- micro-organisms
- algae
- spiders

Figure 1: Non-Native Species in the Sub-Antarctic



Source: Frenot, Y et al. Biological invasions in the Antarctic: extent, impacts and implications. *Biol. Rev.* (2005), **80**, pp. 45-72.