

Tourism in Antarctica

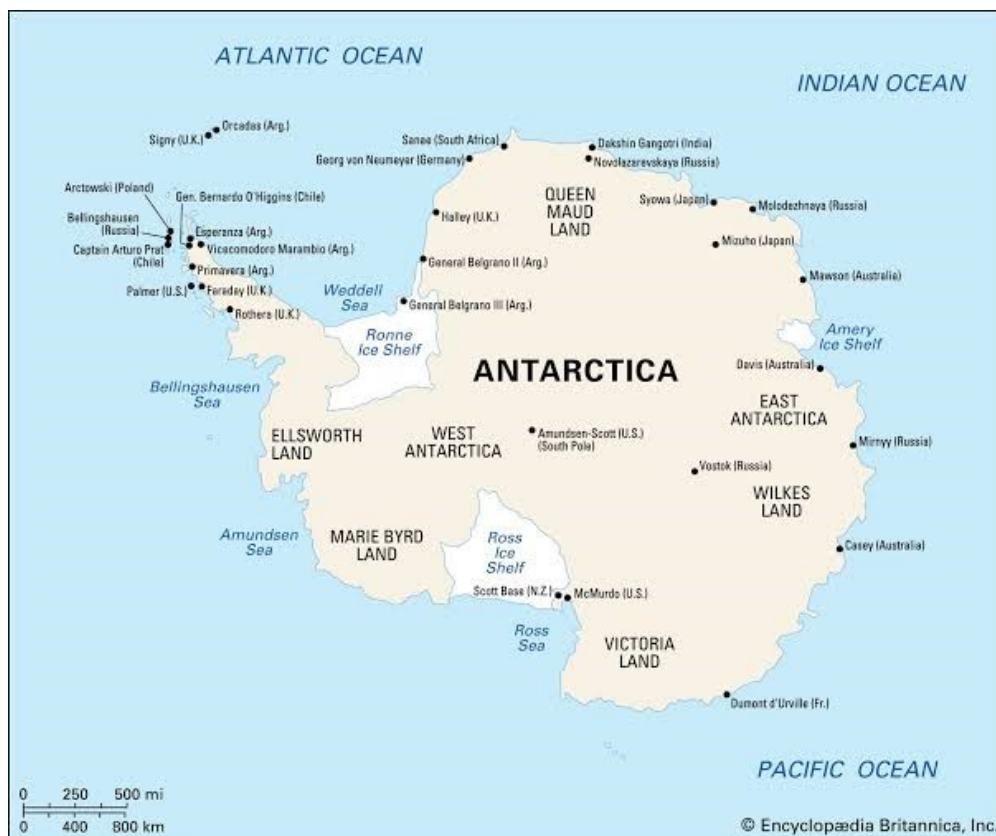
Mains: GS -I - Geography | GS-III - Ecology & Environment

Why in News?

Unchecked tourism in Antarctica is rising sharply; this surge threatens the fragile ecosystem, making sustainable tourism essential to protect the continent's future.

What are the features of Antarctica?

- **Antarctica** - It is the coldest, windiest, and driest of all the continents on Earth.
- **Geography** - It is one among the seven continents of the Earth and contains the geographic South Pole.
- **Size** - It is the 5th largest continent.



- **Coverage** - Antarctica is covered by ice sheets nearly 1.6 km thick, covering about 98% of the entire continent, and this is nearly 90% of the entire world's ice.
- **Source of water** - About 70% of the world's freshwater reserves are frozen in Antarctica.
- **Climate** - Antarctica has an extremely cold, dry climate.

- **Precipitation** - It is mainly a polar desert, with annual precipitation of over 200 mm, mainly in the form of snow.
- **Temperatures** - It holds the record for the lowest measured temperature on Earth, $-89.2\text{ }^{\circ}\text{C}$ ($-128.6\text{ }^{\circ}\text{F}$).
 - **Near the coast** - The temperature can exceed $10\text{ }^{\circ}\text{C}$ in summer and fall to below $-40\text{ }^{\circ}\text{C}$ in winter.
 - **Over the elevated inland** - It can rise to about $-30\text{ }^{\circ}\text{C}$ in summer but fall below $-80\text{ }^{\circ}\text{C}$ in winter.
- **Fauna** - Antarctica is best known for its charismatic penguins, seals and whales.
- **Flora** - Due to the harsh cold conditions, there are *no trees or shrubs*.
- Vegetation is limited mostly to primitive plants like lichens, mosses, liverworts and algae.
- **Flowering Plants** - Antarctic hair grass (*Deschampsia antarctica*) & Antarctic pearlwort (*Colobanthus quitensis*).
- **Population** - Antarctica has no indigenous or permanent human residents.
- However, between 1,000 and 5,000 scientists and support staff live seasonally across various international research stations, such as India's Bharati Station and the American McMurdo Station.

To know about ***Antarctic Greening***, click [here](#)

What about the status of tourism to Antarctica?

- **Governance Framework** - Antarctica does not belong to any sovereign nation, but is a space governed by the *1959 Antarctic Treaty*.
- **Antarctic Treaty** - Declares Antarctica as a neutral, demilitarised zone meant for peaceful scientific research.
- **Tourism Guidelines** - In 1991, the *International Association of Antarctica Tour Operators* was set up so that the tourism industry had functional guidelines.
- **Rules & Regulations** - Most major cruise lines and travel operators to Antarctica are now part of this voluntary consortium, which has strict rules about
 - The size of cruise ships,
 - The number of people that can be on any landing site at a time,
 - Biosecurity measures to prevent the spread of invasive species and diseases, and
 - Guidelines for wildlife watching.
- **Growth of Tourism** - Commercial tourism to Antarctica started only in 1966 by an American entrepreneur, who took 57 travellers on a cruise.
- **Visitor Numbers** - Towards the turn of the 21st century, fewer than 8,000 people visited Antarctica each year, while in the 2023-24 season, the continent received 1,25,000 tourists.
- **Future Projection** - And predictions show that if left unchecked, tourist numbers could reach half a million by 2033.
- **Fragile Landscape** - The numbers may look small compared to other destinations, but Antarctica's ecosystem is extremely fragile, making even modest tourism growth alarming.
- **Key Drivers** - The reasons for this rapid increase are multifold, starting from the collective

- Post-COVID appetite for travel
- Social media influences the “bucket lists” promoted by influencers.
- **Last Chance Tourism** - A darker trend where travellers rush to visit Antarctica out of fear it may disappear in the near future due to climate change.
- Driven mainly by wealthy, frequent travellers who want to experience it before it's gone.
- **Overall Experience** - The combination of untouched nature, wilderness, wildlife, and remoteness makes Antarctica a rare and powerful destination, leaving travellers with lasting impressions.

Why is it important to protect Antarctica?

- **Climate Regulation** - The vast ice sheet regulates the Earth's temperature by reflecting sunlight back into space and driving global ocean currents.
- **Sea-Level Control** - Antarctica holds about 90% of the world's fresh water.
- If this ice were to melt completely, global sea levels would rise by nearly 230 feet, devastating coastal regions worldwide.
- **Scientific Importance** - It is vital for climate research and understanding Earth's systems, which serves as a natural laboratory for studying global warming, ice dynamics, and biodiversity.
- **Fragile Marine Biodiversity** - The surrounding Southern Ocean supports a unique and complex food web, including krill, penguins, whales, and seals.
- **Peace and Shared Stewardship** - It is governed by the Antarctic Treaty; the continent is preserved as a demilitarised zone dedicated exclusively to peace and science.

What are the impacts to Antarctic due to tourism?

- **Wildlife Disturbance** - The more tourist presence alters penguin reproductive and social behaviour & stress seals, whales, and birds.
- **Habitat & Site Damage** - The foot traffic erodes fragile soils and vegetation; invasive species risk from seeds, microbes, or diseases carried by tourists.
- **Pollution Risks** - The large cruise ships pose danger of oil or fuel spills, waste management challenges, etc.
- **Carbon Footprint** - Travel to Antarctica requires long-haul flights and fuel-intensive ships, which adds significantly to global emissions, worsening climate change.
- **Climate Change Link** - The reduction of sea ice and warmer conditions open new areas for tourism, extending the season; this will increase the human footprint in previously untouched regions.

What needs to be done?

- **Global Cooperation** - Antarctica is protected through scientific research, conservation policies, and strict international agreements with an aim to preserve its fragile ecosystem and scientific value.
- **Sustainable Tourism** - Allowing travellers to witness the continent's beauty and fragility first-hand helps foster a deeper appreciation for Antarctica and strengthens global support for its protection.

- **Responsible Travel Practices** - Travel with companies that are committed to the principles of conservation and sustainability, while also supporting scientific research in the region.
- There are a handful of these, plying smaller ships with fewer passengers and multiple experts onboard.
- **Focus on Education** - Education is a big part of the planning process - People often imagine it as a luxury cruise, but in reality, it is much more about discovery and learning about the environment.

References

1. [The Hindu | At the end of the world in Antarctica](#)
2. [National Geography | Antarctica](#)

