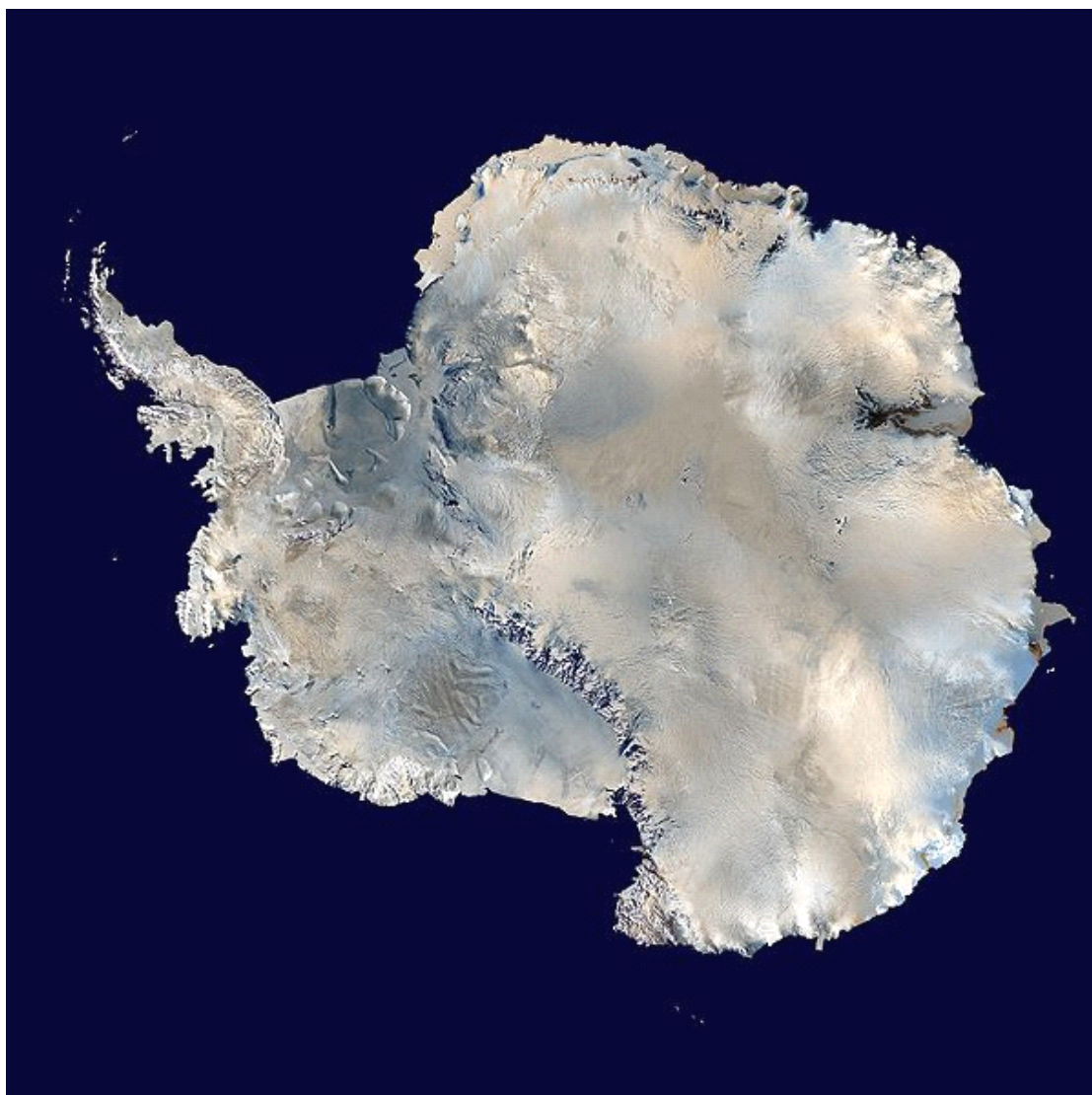
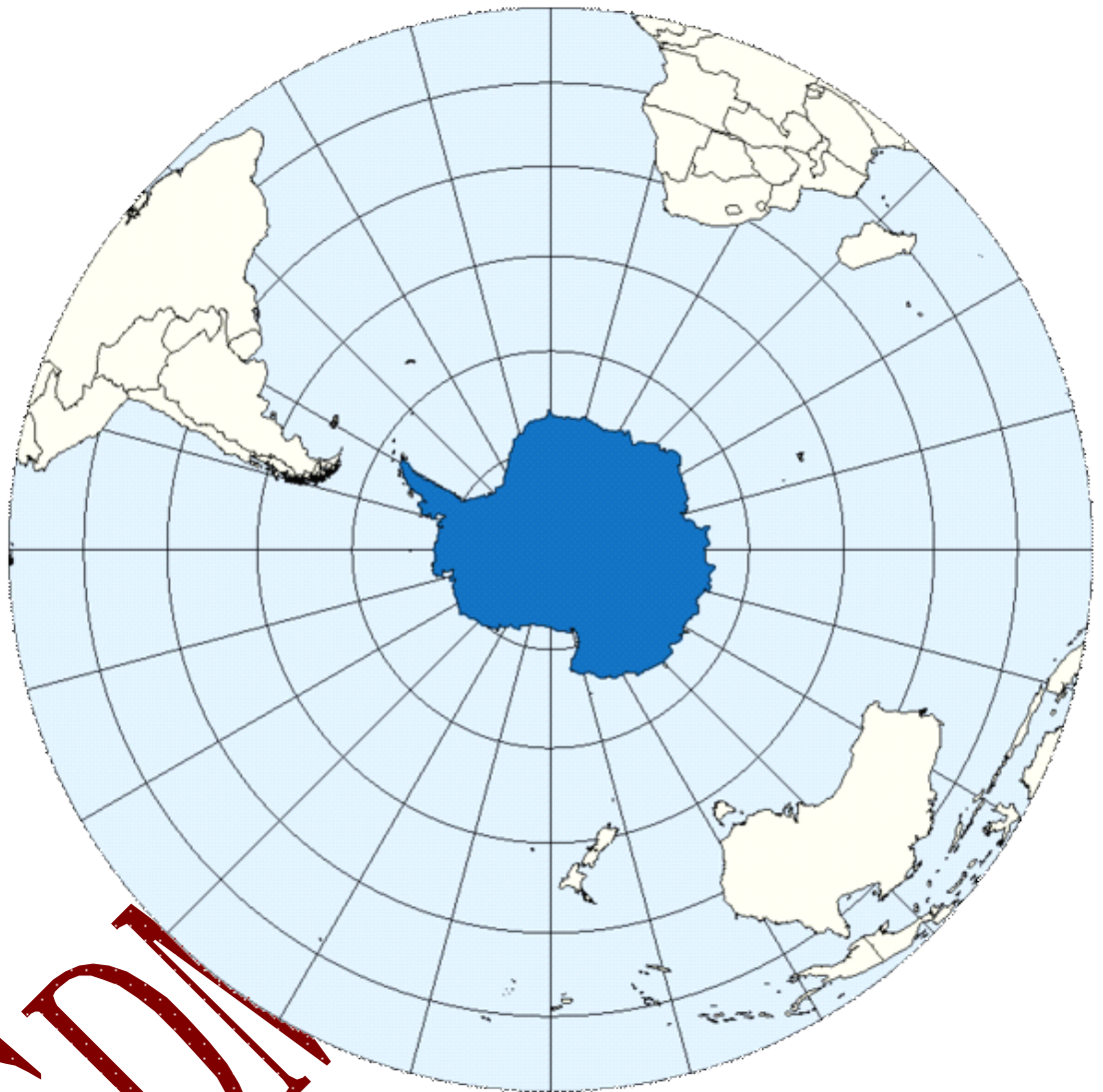




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# Antarctic issue





## ELEMENTARY DESCRIPTION OF THE ANTARCTIC CONTINENT

Antarctica is Earth's southernmost continent, underlying the South Pole. It is situated in the Antarctica region of the southern hemisphere, almost entirely south of the Antarctic Circle, and is surrounded by the Southern Ocean. At 14.0 million km<sup>2</sup> (5.4 million sq mi), it is the fifth-largest continent in area after Asia, Africa, North America, and South America. About 98% of Antarctica is covered by ice, which averages at least 1.6 kilometres (1.0 mi) in thickness.

On average, Antarctica is the coldest, driest and windiest continent, and has the highest average elevation of all the continents. Antarctica is considered a desert, with annual precipitation of only 200 mm (8 inches) along the coast and far less inland. There are no permanent human residents, but anywhere from 1,000 to 5,000 people reside at the various research stations scattered across the continent throughout the year. Only cold-adapted plants and animals survive there, including penguins, seals, mosses, lichen, and many types of algae.



The name Antardica is the romanized version of the Greek compound word  $\alpha\nu\tau\alpha\rho\kappa\tau\iota\kappa\acute{\eta}$  (antarktiké), feminine of  $\alpha\nu\tau\alpha\rho\kappa\tau\iota\kappa\acute{o}\varsigma$  (antarktikos), meaning "opposite to the north".

Although myths and speculation about a Terra Australis ("Southern Land") date back to antiquity, the first confirmed sighting of the continent is commonly accepted to have occurred in 1820 by the Russian expedition of Mikhail Lazarev and Fabian Gottlieb von Bellingshausen. However, the continent remained largely neglected for the rest of the 19th century because of its hostile environment, lack of resources, and isolation. The first formal use of the name "Antarctica" as a continental name in the 1890s is attributed to the Scottish cartographer John George Bartholomew.

About 98% of Antarctica is covered by the Antarctic ice sheet, a sheet of ice averaging at least 1.6 kilometres (1.0 mi) thick. The continent has about 90% of the world's ice (and thereby about 70% of the world's fresh water). If all of this ice were melted, sea levels would rise about 60 metres (200 ft). In



most of the interior of the continent, precipitation is very low, down to 20 millimetres (0.8 in) per year; in a few "blue ice" areas precipitation is lower than mass loss by sublimation and so the local mass balance is negative. In the dry valleys the same effect occurs over a rock base, leading to a desiccated landscape.

Antarctica is the coldest place on Earth. The coldest natural temperature ever recorded on Earth was  $-89.2^{\circ}\text{C}$  ( $-128.6^{\circ}\text{F}$ ) at the Russian Vostok Station in Antarctica on 21 July 1983. For comparison, this is  $11^{\circ}\text{C}$  colder than subliming dry ice. Antarctica is a frozen desert with little precipitation; the South Pole itself receives less than 10 centimeters (4 in) per year, on average. Temperatures reach a minimum of between  $-80^{\circ}\text{C}$  and  $-90^{\circ}\text{C}$  ( $-112^{\circ}\text{F}$  and  $-130^{\circ}\text{F}$ ) in the interior in winter and reach a maximum of between  $5^{\circ}\text{C}$  and  $15^{\circ}\text{C}$  ( $41^{\circ}\text{F}$  and  $59^{\circ}\text{F}$ ) near the coast in summer. Sunburn is often a health issue as the snow surface reflects almost all of the ultraviolet light falling on it. Eastern Antarctica is colder than its western counterpart because of its higher elevation. Weather fronts rarely penetrate far into the continent, leaving the center cold and dry. Despite the lack of precipitation over the central portion of the continent, ice there lasts for extended time periods. Heavy snowfalls are not uncommon on the coastal portion of the continent, where snowfalls of up to 1.22 meters (48 in) in 48 hours have been recorded.

At the edge of the continent, strong katabatic winds off the polar plateau often blow at storm force. In the interior, however, wind speeds are typically moderate. During summer, more solar radiation reaches the surface during clear days at the South Pole than at the equator because of the 24 hours of sunlight each day at the Pole. There is some evidence that Antarctica is warming as a result of human  $\text{CO}_2$  emissions.



The main mineral resource known on the continent is coal. It was first recorded near the Beardmore Glacier by Frank Wild on the Nimrod Expedition, and now low-grade coal is known across many parts of the Transantarctic Mountains. The Prince Charles Mountains contain significant deposits of iron ore. The most valuable resources of Antarctica lie offshore, namely the oil and natural gas fields found in the Ross Sea in 1973. Exploitation of all mineral resources is banned until the year 2048 by the Protocol on Environmental Protection to the Antarctic Treaty.



Antarctica has no permanent residents, but a number of governments maintain permanent manned research stations throughout the continent. The number of people conducting and supporting scientific research and other work on the continent and its nearby islands varies from about 1,000 in winter to about 5,000 in the summer.

## Antarctic territorial claims

Antarctica has no government and belongs to no country. Various countries claim areas of it, but while some have mutually recognized each other's claims, no other countries recognize such claims.

Since 1959, new claims on Antarctica have been suspended and the continent is considered politically neutral. Its status is regulated by the 1959 Antarctic Treaty and other related agreements, collectively called the Antarctic Treaty System. For the purposes of the Treaty System, Antarctica is defined as all land and ice shelves south of 60° S. The treaty was signed by twelve countries, including the Soviet Union (and later Russia), the United Kingdom,



Argentina, Chile, Australia and the United States. It set aside Antarctica as a scientific preserve, established freedom of scientific investigation, environmental protection, and banned military activity on that continent. This was the first arms control agreement established during the Cold War.

Seven sovereign states have made eight territorial claims to land in Antarctica below the 60° S parallel before 1961. These claims have been recognized only between the countries making claims in the area. All claim areas are sectors, with the exception of Peter I Island. None of these claims has an indigenous population. The South Orkney Islands fall within the territory claimed by Argentina and United Kingdom, and the South Shetland Islands fall within the areas claimed by Argentina, Chile, and the United Kingdom. The UK, France, Australia, New Zealand and Norway all recognise each others claims, which do not overlap. Prior to 1962, British Antarctic Territory was a dependency of the Falkland Islands and also included South Georgia and the South Sandwich Islands. The Antarctic areas became a separate overseas territory following the ratification of the Antarctic Treaty. South Georgia and the South Sandwich Islands remained a dependency of the Falkland Islands until 1985 when they too became a separate overseas territory.

**Official claims**

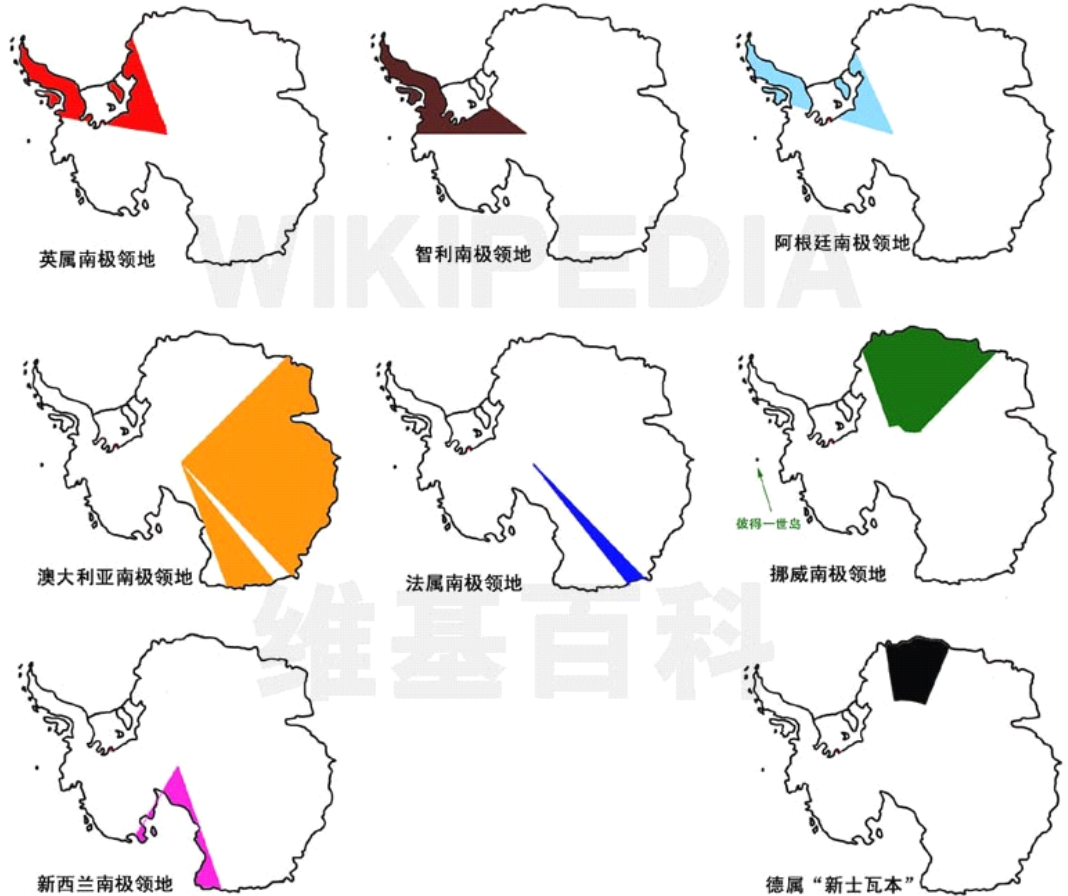
Territory	Claimant	Date	Claim limits
 <b>Adélie Land</b> (District of French Southern and Antarctic Lands)	 France	1924	 142°2'E 136°11'E
 <b>Antártica</b> (Commune of Antártica Chilena Province)	 Chile	1940	 53°W 90°W
 <b>Argentine Antarctica</b> (Department of the province of Tierra del Fuego, Antarctica, and South Atlantic Islands)	 Argentina	1942	 25°W 74°W
 <b>Australian Antarctic Territory</b> (External territory of Australia)	 Australia	1933	 160°E 142°2'E 136°11'E 44°38'E
 <b>British Antarctic Territory</b> (Overseas territory of the United Kingdom)	 United Kingdom	1908	 20°W 80°W
 <b>Dronning Maud Land</b> (External territory of Norway)	 Norway	1939	 44°38'E 20°W
 <b>Peter I Øy</b> (External territory of Norway)	 Norway	1929	 68°50'S 90°35'W
 <b>Ross Dependency</b> (Dependency of New Zealand)	 New Zealand	1924	 150°W 160°E

## Unofficial claims

Territory	Claimant	Date	Claim limits
 <b>Brazilian Antarctica</b> (Zone of interest of Brazil)	 Brazil	1986	 28°W 53°W

## Historic claims

Territory	Claimant	Date	Claim limits
 <b>New Swabia</b> (Former protectorate of Nazi Germany)	 Nazi Germany	1939 1945	 20°E 10°W



## Antarctic Treaty System

The Antarctic Treaty and related agreements, collectively called the Antarctic Treaty System or ATS, regulate international relations with respect to Antarctica, Earth's only continent without a native human population. For the purposes of the treaty system, Antarctica is defined as all land and ice shelves south of 60°S latitude. The treaty has now been signed by 46 countries, including the now-defunct Soviet Union, the United Kingdom, and the United States, and set aside Antarctica as a scientific preserve, established freedom of scientific investigation and banned military activity on that continent.





## The (main) Antarctic Treaty

The main treaty was opened for signature on December 1, 1959, and officially entered into force on June 23, 1961.[1] The original signatories were the 12 countries active in Antarctica during the International Geophysical Year (IGY) of 1957-58 and willing to accept a US invitation to the conference at which the treaty was negotiated. These countries were the ones with significant interests in Antarctica at the time: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the Soviet Union, the United Kingdom and the United States. Between them, the signatories had established over 50 Antarctic stations for the IGY. The treaty was a diplomatic expression of the operational and scientific cooperation that had been achieved "on the ice".

### Articles of the Antarctic Treaty

Article 1 - area to be used for peaceful purposes only; military activity, such as weapons testing, is prohibited, but military personnel and equipment may be used for scientific research or any other peaceful purpose;

Article 2 - freedom of scientific investigation and cooperation shall continue;

Article 3 - free exchange of information and personnel in cooperation with the United Nations and other international agencies;

Article 4 - does not recognize, dispute, or establish territorial sovereignty claims and no new claims shall be asserted while the treaty is in force;

Article 5 - prohibits nuclear explosions or disposal of radioactive wastes;

Article 6 - includes under the treaty all land and ice shelves south of 60 degrees 00 minutes south;

Article 7 - treaty-state observers have free access, including aerial observation, to any area and may inspect all stations, installations, and equipment; advance notice of all activities and of the introduction of military personnel must be given;



Article 8 - allows for jurisdiction over observers and scientists by their own states;

Article 9 - frequent consultative meetings take place among member nations;

Article 10 - treaty states will discourage activities by any country in Antarctica that are contrary to the treaty;

Article 11 - disputes to be settled peacefully by the parties concerned or, ultimately, by the International Court of Justice;

Articles 12, 13, 14 - deal with upholding, interpreting, and amending the treaty among involved nations.

The main objective of the ATS is to ensure in the interests of all mankind that Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord. The treaty forbids any measures of a military nature, but not the presence of military personnel per se.

## Other agreements

Other agreements - some 200 recommendations adopted at treaty consultative meetings and ratified by governments - include:

Agreed Measures for the Conservation of Antarctic Fauna and Flora (1964) (entered into force in 1982)

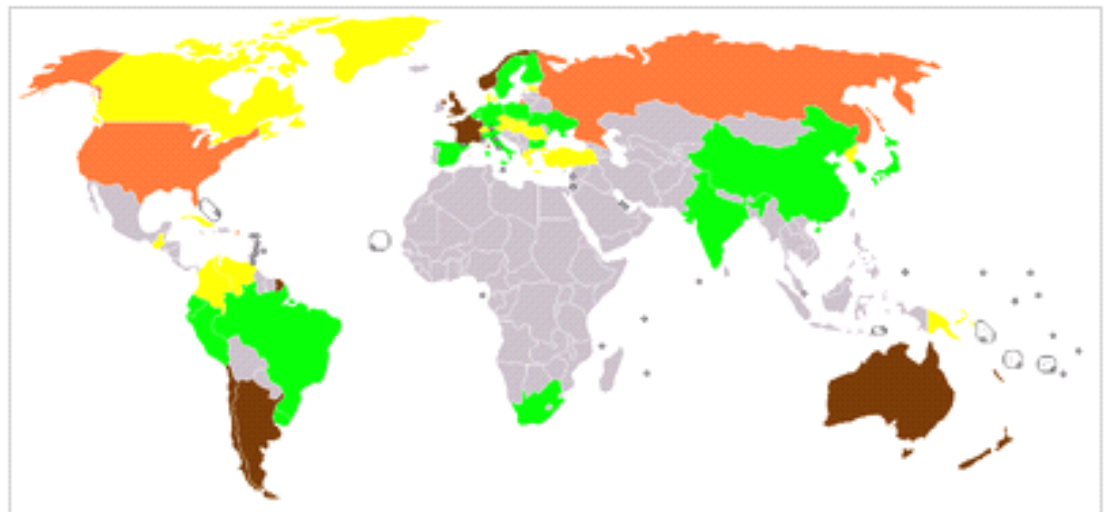
The Convention for the Conservation of Antarctic Seals (1972)

The Convention for the Conservation of Antarctic Marine Living Resources (1980)

The Convention on the Regulation of Antarctic Mineral Resource Activities (1988) (although it was signed in 1988, it was subsequently rejected and never entered into force)

The Protocol on Environmental Protection to the Antarctic Treaty was signed October 4, 1991 and entered into force January 14, 1998;

## The members of Antarctic Treaty



- signatory, consulting, territorial claim
- signatory, consulting, reserved right for territorial claim
- signatory, consulting
- signatory, acceding status
- non-signatory

**Attachment:**

**《The Antarctic Treaty》**

**[http://en.wikisource.org/wiki/Antarctic\\_Treaty](http://en.wikisource.org/wiki/Antarctic_Treaty)**