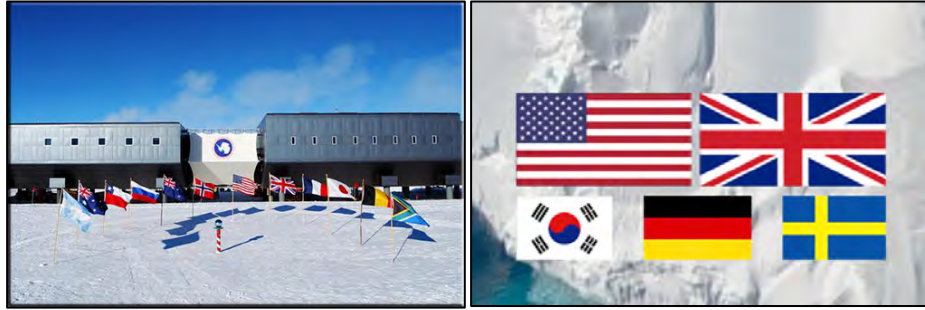


UPDATE FROM ANTARCTICA!
News for Students 12-18 yrs.
THE ANTARCTICA TREATY CELEBRATES A BIRTHDAY!
SIXTY YEARS DEDICATED TO SCIENCE!



The International Thwaites Glacier Collaboration (ITGC) builds on the Antarctic Treaty.

In 1959, scientists from around the world worked together to bring change to Antarctica. Scientists had just completed the *International Geophysical Year*, a year of intense scientific collaboration in both Polar Regions. The researchers recognized the scientific importance of the continent, and the critical need for ongoing open access. They wanted to protect this fragile ecosystem from the impacts of war and resource extraction for commercial gain. Together, they created history as the Antarctic Treaty was put in place, protecting the land and resources from war and private ownership and encouraging scientific research partnerships, like our work through the International Thwaites Glacier Collaboration a five-year partnership to study the vulnerable Thwaites Glacier in Antarctica.

Antarctica: the Early Days

The human ‘discovery’ of Antarctica is linked to several early sailing expeditions, but in general it is agreed that 1820 brought the first real sighting of both the peninsula and the continent by three separate teams, British, Russian and American. Many countries were interested in claiming part of this large and unusual piece of land and the rich resources like seals and whale that could be found there, so more expeditions followed.



1840 trip to Antarctica by Dumont d’Urville using the *Astrolabe*.

Establishing Land Ownership

Around the globe, early exploration was done to search for new land and resources. When new land was located, it was claimed for the country funding the exploration. Antarctica had no native population and so each new ship landing brought a new claim of ownership. By 1959, seven different countries

had claimed sections of Antarctica, with other countries still hoping to claim a piece. Aside from scientific observation these countries focused on natural resource access and minerals exploration, fishing, sealing and whaling. Security concerns became more of an interest in a time following two World Wars with nations planning Antarctic military bases

What Changed?

In 1957, after World War II, the polar research community joined together to intensively study both the Arctic and the Antarctic as part of an International Polar Year (IPY). Four IPY events have occurred in the last 138 years, with the 1957 event called the “International Geophysical Year” (IGY). Each of these events focused on multiple nations collaborating to intensively study and expand the scientific understanding of the polar regions. During IGY, sixty-seven countries were involved in the Antarctic collaboration, building twelve new Antarctic bases. At the conclusion of IGY twelve of the leading nations who had been involved argued to establish Antarctica as a special and unique space, with all territory south of 60° latitude forever set aside “to be used exclusively for peaceful purposes”. This came into effect in 1961 when international tensions remained high. The treaty’s partnerships have grown, with currently 54 parties as voting members.

The International Thwaites Glacier Collaboration is a partnership between the U.S. and the U.K. with several other nations contributing to this large initiative. It is difficult and expensive to work in the extreme environment found in Antarctica and collaborations include everything from working from bases managed by different countries, to sharing instrumentation, ships, aircraft, data and science staff.



In 1959 twelve countries agreed to the first Antarctic Treaty. Each was involved in scientific research in Antarctica and saw the benefits of working together to study and protect this very special environment. This photo of the countries' representatives was taken at the South Pole.



The flags on this Antarctic image show how many countries have joined together around the treaty since it was first agreed to sixty years ago! Many countries have signed on, and others have agreed to its guideline.



Wildlife is an important part of the protections that are included in the Antarctic Treaty. Antarctica is home to a variety of wildlife including seals, like this crabeater seal, penguins, whales, birds and fish.



The partnership of the International Thwaites Glacier Collaboration is an example of the importance of the Antarctic Treaty, with several nations working together to improve scientific understanding of Thwaites Glacier.

Science Technology Engineering and Math (STEM) Connections

The following questions are designed to be open-ended leading to a class discussion.

- 1) What scientific benefits can you imagine resulting from the Antarctic Treaty?
- 2) The Antarctic Treaty began to form in 1959 with 12 leading nations (Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the Soviet Union, the United Kingdom, and the United States). This was just after World War II and during a time called the Cold War, when there was great distrust between some of these nations. What kind of challenges might the countries have faced in trying to set up the treaty?
- 3) If the Antarctic Treaty had not happened in 1959, do you think these 12 countries could come together today to sign a treaty to protect Antarctica and its resources?

Photo credits: Photo credits: L-R: NSF, ITGC, New Zealand, BAS, M. Turrin, James Kirkham/GHC team.

See More: <https://thwaitesglacier.org/index.php/media/itgc-why-are-us-and-uk-collaborating>

Websites consulted - <https://www.south-pole.com/p0000052.htm>;

<https://www.bas.ac.uk/about/antarctica/the-antarctic-treaty/>

<https://thwaitesglacier.org>