

Environmental Committee (EC)

Preventing the exploitation of natural resources
in Antarctica



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| Forum: | Environmental Committee |
| Issue: | Preventing the exploitation of natural resources in Antarctica |
| Student Officer: | Tanguy Lacroix |
| Position: | President |

Introduction

In our modern world, the demand for natural resources is ever-growing due to phenomena such as population growth and increasing levels of income. To meet such exacerbating demand, there are two possible solutions: rendering the use of already-present resources less wasteful and more efficient or increasing the supply of resources by finding new sources. Of which, the latter is most often opted for, as is the case of our issue: environments –in this case, Antarctica– being exploited for their resources.

Antarctica, also known as the South Pole is a continent situated –well– southern of all nations and is defined as any area of land at a latitude of 90 degrees south. Firstly discovered in 1820 through scientific expeditions. Antarctica’s unfamiliar conditions make it interesting for scientific research and it has been used for such purposes by a wide range of nations without many regulations until the [Antarctic Treaty](#) was ratified in 1959 by the 12 countries conducting research there at the time.

The exploitation of an environment for its resources is a global issue which is faced not only in Antarctica. But due to Antarctica’s vulnerability to other factors such as climate change and its uniqueness; it remains of common interest to ensure its treatment is sustainable and does not harm the land and the organisms which inhabit it.

Definition of Key Terms

Multilateral governance

Multilateral governance refers to a leading body made up of multiple parties –or nations– who collaborate to make decisions for a certain area.

Minerals

Minerals are pure inorganic (not alive) solid substances, for example, zinc. They are often valued in a multitude of sectors due to their chemical properties.

Bioactive compounds

Bioactive compounds are a resource which impact other organisms, in short, they are used primarily for pharmaceuticals and are found in plants and vegetables.

Research station/base

Research stations and bases are examples of infrastructure which is dedicated for research purposes where observations and experiments can be allowed to occur

Bycatching

Bycatching is a side-effect of fishing where a non-targeted species (often birds) are caught in nets and die from drowning. This is an issue as it can worsen the conditions of endangered species.

General Overview

Ownership, governance and usage of Antarctica – the Antarctic Treaty System

Antarctica remains one of the largest areas of land which no singular country officially operates or owns territory of. Antarctica has in fact no real population to govern and hence no need for a usual government. Therefore, a multilateral governance was agreed upon by twelve countries in 1959 known as the **Antarctic Treaty System (ATS)**. The **Antarctic Treaty** agreed on the use of Antarctica for scientific research but forbade militarization and mineral foraging; as years passed, the treaty now has fifty-four signatory countries. It operates through yearly meetings between twenty-eight of the signatory nations where the previous year's agreed-upon treaty is amended to match modern ideals for the usage of Antarctica.

Despite this, countries do have unofficial territorial claims over Antarctica such as the **United Kingdom** and more but there is no actual ownership of the land by any of these countries. Furthermore, a total of 68 bases are operated within Antarctica by various nations including the **United States of America** (who owns three bases) and the **People's Republic of China** (who owns four bases and is constructing a fifth).

On paper, such bases are used purely for scientific purposes. However, this is not the actual case as many bases are suspected to operate on a double front with ‘behind-the-door’ military usage by countries such as [Argentina](#) and [Chile](#). This is due to Antarctica’s prime conditions for radio transmitting and other remote operations.

Resources in Antarctica

Antarctica is known to have a wide range of natural resources, whether under its ice or under its sea. The largest issue, disregarding the [Madrid Protocol](#)’s anti-mining agreement, is that the conditions in Antarctica make the extraction of such resources incredibly difficult and as a result: costly. The question remains if climate change will make this process less costly as a result of processes such as melting ice sheets. There are three main types of resources which have potential for exploitation: fossil fuels, minerals and living resources.

Fossil fuels

There are known sizable deposits of fossil fuels in Antarctica, particularly in the form of petroleum. 100 billion barrels of oil are hypothesized to be present within the continent of Antarctica which is more than [Kuwait](#) and [Abu Dhabi](#). This is known through surveying of the area since 1970. As aforementioned, the extraction of these deposits still remains lowly profitable despite under-sea extraction methods already being developed but most importantly illegal.

Minerals

It should be noted that 99% of Antarctica’s continent still remains unexposed and covered in ice. So it is hard to estimate the quantity and quality of mineral deposits in the area. Nevertheless, Antarctica’s geology has been compared to that of [South Africa](#) and [Australia](#) which are both mineral-rich lands, especially in terms of copper, gold, platinum along with other minerals. Expeditions have also noted the presence of antimony, chromium, copper, gold, lead, molybdenum, tin, uranium, and zinc. The conditions in Antarctica only render highly valued minerals’ extraction profitable, such as for diamonds. But this is still deemed illegal by the [Antarctic Treaty](#).

Living Resources

Most commercial activities conducted surrounding Antarctica are in regard to its living resources. Activities such as commercial fishing, sealing, whaling and much more. Additionally,

the harvesting of bioactive compounds occurs on the continent for the pharmaceutical industry. Activities regarding this resource remain one of the least regulated and are known to harm Antarctica's ecosystems as will be elaborated upon in a later sub-section.

Tourism

Tourism is one of the services provided in Antarctica. Antarctica has been deemed appealing due to its out-of-the-ordinary scenery since the 1950s. Nowadays, on average, about 170,000 tourists visit each peak season. Tourism in Antarctica is mostly in the form of sightseeing overflights and cruising around the area as well as some on foot expeditions. These activities have caused a stress on sectors such as waste management due to littering. Due to demand for services, some of Antarctica's bases gave touristic functions like the Union Glacier Camp, tourism is even expected to expand in future years.

Scientific research

As stated earlier, the biggest activity occurring in Antarctica is scientific research. The research undertaken is highly varied, ranging from telescopes to observing the impact of human activities on the environment seeing as Antarctica remains largely untouched. Such research has to abide by the terms of the [Protocol on Environmental Protection to the Antarctic Treaty \(PEPAT\)](#) which is part of the [Antarctic Treaty](#).

Nuclear research is one of the prohibited researches in Antarctica since 1972 after a defective american nuclear plant contaminated 12 thousand tons of soil which was then transported and stored near [Los Angeles](#), furthermore, the continent's proximity to [South American nations](#) like [Argentina](#) and [Chile](#) could signify significant damage.

Illegal activities

Antarctica, like any place, is subject to illegal activities. In Antarctica's case, this can be in the form of unauthorized fishing. The fishing of certain species is prohibited due to their endangered nature, but sadly, it still occurs causing possibility for extinction such as for the Patagonian Toothfish. These activities still occur today despite the implementation of the [Antarctic Treaty](#).

Impact on Antarctica

There are many downsides to the exploitation of resources in Antarctica. Particularly regarding non-human life forms of the region which are already impacted by repercussions of climate change. For example, bycatching and overfishing are (results of) unsustainable fishing practices; these may cause

extinction of species or severe endangerment. The **Antarctic Treaty**'s sub-division titles **Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)** is in charge of tackling these exact issues and more in order to ensure that activities occurring in Antarctica are regulated so as to have a minimally negative impact.

Antarctica is also the world's largest storage of fresh water. So activities such as tourism cause a large amount of contamination of said water which limits our already scarce fresh water resources.

Major Parties

The Antarctic Treaty System

The ATS is the official Antarctic government. They have three divisions:

- Convention for the Conservation of Antarctic Seals
- Convention on the Conservation of Antarctic Marine Living Resources
- Protocol on Environmental Protection to the Antarctic Treaty

In short, the ATS seeks to prioritize peacefulness and research within the area as well as tackling issues regarding harmful activities occurring by drafting clear and up-to-date legislation through actively meeting to amend the treaty

Antarctic Treaty Signatories

Signatories of this treaty are bound to follow its conditions, there are currently fifty-four signatories that can be found on [this web page](#).

The United States of America

The **USA** is interested in protecting Antarctica while also conducting research there. They are a member of the original **Antarctic Treaty** signatories and hosted its ratification in Washington DC. It is worth noting that the **USA** owns multiple research stations within the area and therefore has a vested interest in maintaining current research protocols. The **US's** interest in Antarctica for research was at first for nuclear testing which was later banned (in 1972) due to fear of consequences on nearby countries.

Argentina and Chile

Argentina and Chile are the nearest nations to Antarctica hence they are particularly keen on conserving anti-nuclear legislation in the treaty as they could suffer major repercussions even from peaceful nuclear testing in terms of nuclear fallout.

Timeline of Key Events

| Date | Description of event |
|---------------------------------|--|
| 1820 | Discovery of Antarctica |
| December 1 st , 1959 | Antarctic Treaty is signed by the twelve original nations |
| June 23 rd , 1961 | Antarctic Treaty comes into action |
| 1963 | Decommission of McMurdo nuclear power plant due to frequent malfunctions |
| January 14 th , 1998 | Entry into action of Madrid Protocol |

UN Involvement, Relevant Resolutions, Treaties and Events

- The Antarctic Treaty, June 23 1961
- Question of Antarctica, 15 December 1989 (A/RES/44/124)
- Question of Antarctica, 9 December 1992 (A/RES/47/57)
- Madrid Protocol, 14 January 1998
- [General Guidelines and Site Guidelines Checklist for Visitors to the Antarctic](#), June 24 2020, (ATCM XLIII - CEP XXIII)

Previous Attempts to solve the Issue

The [Antarctic Treaty](#) is a treaty originally ratified by 12 nations (Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, Russian Federation, South Africa, United Kingdom, United

States) in 1961. This treaty has three specific aims: demilitarizing Antarctica, cooperation in scientific activity in Antarctica between nations and eliminating territorial disputes over the continent. This treaty is deemed successful due to its growth in signatory nations since it came into action with 54 nations having agreed upon its terms. The Antarctic Treaty is also discussed yearly between 28 of the said nations in the [Antarctic Treaty Consultative Meeting \(ATCM\)](#) to modify it, so far, more than 300 changes have been proposed and 3 have been accepted (Convention for the Conservation of Antarctic Seals, Convention on the Conservation of Antarctic Marine Living Resources and the Protocol on Environmental Protection to the Antarctic Treaty). The treaty will remain in order indefinitely.

The [Madrid Protocol](#) is a treaty whose key aim is to ban mining in Antarctica (Article 7) indefinitely which it did when it passed on the 14th of January in 1998 through legally binding components. So far, mining in Antarctica has not occurred hence this attempt to solve this issue is successful however mining is only one of the resources open for exploitation in Antarctica hence there is a need for similarly effective measures to be taken in other sectors such as in wildlife protection and in fossil fuel extraction (which is a smaller issue than the previous).

Possible Solutions

It is important to understand the implications of extracting resources from Antarctica, hence research should continue to be prioritized in the region. This can be done through subsidies to private research corporations or by lowering barriers to research in the area through legislation in the Antarctic Treaty. However, research needs to be heavily moderated so it does not cause damage to Antarctica's resources, for example, some surveying methods can harm underwater wildlife. Additionally, research should not be focused on the quantity and profitability of resources but rather on whether the extraction of these resources will be harmful to Antarctica and if there are technologies which can avoid this damage.

Another possible solution to tackle the exploitation of natural resources in Antarctica could be simply further limiting the access to Antarctica for commercial and non-research purposes until the aforementioned research has been completed. These measures should be particularly targeting tourism

firms as this is one the least regulated activities in Antarctica and one which is greatly damaging its environment.

Further measures could include increasing surveillance for illegal extraction of Antarctic resources. Such activities being particularly prominent in fishing; investing into increased policing of the area could greatly decrease the exploitation of resources in the area by eradicating unsustainable fishing methods. This policing will ensure all fishing is being conducted in accordance with the **Antarctic Treaty** and could either be conducted in Antarctica itself directly or locally within nations by monitoring fishing imports for endangered Antarctic species.

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