

# Environment Commission

Preventing the exploitation of  
natural resources in Antarctica



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| <b>Forum</b>            | Environmental Commission                                       |
| <b>Issue:</b>           | Preventing the exploitation of natural resources in Antarctica |
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| <b>Position:</b>        | Deputy Chair   |

## Introduction

Antarctica is becoming increasingly important due to its rich storage of rare resources. These resources include the deposits of oil and natural gas. Although the era of mineral and petroleum exploitation has not yet arrived, the possibility looms in the distance and pose a potential significant threat to the indigenous Antarctic environment. The United States and the Soviet Union have begun exploration for hard minerals and Japan is currently hunting Antarctic whales which are unfortunately becoming endangered. As well as this, old Antarctic icebergs may soon be utilised to bring fresh water to areas of the world suffering from droughts such as in Africa and, detailed plans have already been formulated to tow these icebergs to Southern California and Saudi Arabia.

## Definition of Key Term

### Natural Resource

Natural resources are natural assets (raw materials) that occur in nature and can be used for economic production or consumption. They are subdivided into four categories: mineral and energy resources, soil resources, water resources and biological resources.

### Biodiversity

The variation of life forms within a given ecosystem, biome, or the entire Earth. Biodiversity is often used as a measure of the health of specific biological systems.

### Exploitation

The term exploitation describes the action of using natural resources to the fullest or for the most profitable use.

### Mineral Deposit



Mineral deposits are naturally occurring accumulations or concentrations of metals or minerals of sufficient size and concentration that might, under favourable circumstances, have economic value. Economic concentrations of metals or other mineral commodities are known as ore and can easily be exploited.

### **Ecosystem**

A system in which living organisms interact with each other and the environment.

### **Whaling, fishing and sealing**

Whaling is defined as the practice or industry of hunting and killing whales for their oil, meat or whalebone. Fishing is the activity of catching fish, either for food or as a sport. In Antarctica, the Mackerel icefish and Krill are heavily fished in Antarctica. Sealing is the personal or commercial hunting of seals.

### **Ocean acidification**

This term is used to describe and evaluate the changes to the chemistry of an ocean. It takes place when carbon dioxide gas (or CO<sub>2</sub>) is absorbed by the ocean and reacts with seawater to produce acid. This activity has led to the ocean becoming more acidic

### **International Governance**

International Governance describes the movement towards political cooperation among transnational actors, in purpose to negotiate responses to problems that affect more than one country, state or region.

### **Treaty**

A treaty is a formal written agreement between two or more countries or governments. For a treaty to go into effect and be valid, all countries involved must agree with each other and ratify the treaty. The term may also be known as an international agreement, protocol, covenant, pact or convention.

## **General Overview**



Antarctica is the Earth's southernmost continent and is situated on the South Pole with most of it entirely South of the Antarctic Circle. It has a total area of 14,200,00 km<sup>2</sup> and a population of 1,106. The continent is the fifth largest in area after Asia, Africa, North America, and South America. A lot of it is covered by ice, which averages at least 1.6 kilometres thick and is also the largest single mass of ice on Earth, however, it is sadly beginning to melt. Scientists estimate that if the West Antarctic Ice Sheet melted entirely, global sea levels would rise by 16 feet (5 metres). As well as that, Antarctica is incredibly windy with winds that can reach up to 200mph (320km/h). The large continent is also used as storage for fresh water on Earth; home to around 70% of the planet's freshwater.

Despite Antarctica's unique climate, it still has a large biodiversity and is home to several mosses and grasses that manage to survive in the harsh conditions due to their special adaptations. Other than these, plant-life is nearly non-existent in Antarctica due to the coverage of ice. All other organisms in the Antarctic are predators. The continent is home to different types of seals, whales, penguins, bugs, orcas and albatrosses. Furthermore, approximately 1,150 species of fungi have been recorded from Antarctica, of which about 750 are non-lichen forming and 400 are lichen forming. Some of these species are cryptoendoliths as a result of evolution under rigorous conditions and have also contributed to forming the large rock formations of The McMurdo Valleys, known to undergo extremely low humidity.

The discovery of the islands of The Southern Ocean in the eighteenth century led to the start of exploitation in Antarctica. This was when sealing began, which took place on the island of South Georgia. By 1800, all the fur seals found in South Georgia were wiped out and interest then centred on the South Shetland islands. It was only within three years that over 300,000 seals had been killed and the population had virtually been eradicated. This is a clear example of exploitation at its worst in Antarctica with no thought to future development whatsoever. Even more threats towards Antarctica followed during the nineteenth and twentieth century, of which many still exist. Whaling and fishing began in the nineteenth century, mainly targeting blue and right whales. This all started because the whale population in The North Atlantic had reduced by massive exploitation and so the whalers turned their attention to the Southern Ocean. Whale populations drastically declined over the years and many species became endangered. The mass hunting of whales led to the establishment of the International Whaling Commission (ICW) in 1946, which fortunately led to the end of most whaling activity in Antarctica. Most, but not all, whaling nations agreed to stop the slaughter as many species were becoming endangered.



Ocean acidification is also heavily present around The Southern Ocean. Disrupting food webs as the water becomes corrosive to unprotected shells and skeletons of organisms currently living there.

However, There has never been any commercial mining in Antarctica, as mining is completely banned by The Antarctic Treaty System (ATS). The continent is also known to have mineral deposits such as coal and iron ore, which are easy to reach however come with great economic and technical difficulties associated with the recovery of mineral deposits.

Tourism and scientific research are also a threat to Antarctica. Scientists are well briefed about the need for care of the Antarctic environment however, any activity is bound to create some degree of disturbance to the environment and wildlife. Impacts are mainly caused by vehicle exhausts, construction of buildings and the disposal of waste such as fuel, plastics and drums. Tourists go to Antarctica to see the glacial landscapes and wildlife. The tourism in the continent is a well-run industry with a sound record for environmental concern however, the Antarctic ecosystem is extremely fragile, and these disturbances can have knock-on effects.

## Major Countries and Parties Involved

### The International Whaling Commission (IWC)

The International Whaling Commission (IWC) is the global body responsible for the conservation of whales and the management of whaling. The Commission was established in 1946 for maintaining the proper conservation of whale stocks and the orderly development of the whaling industry. The IWC currently has 89 member governments from countries all over the world. Its main duty is to keep under review the measures laid down by the Whaling Convention, which controls the conduct of whaling throughout the world. Examples of what these measures provide for include, complete protection of certain whale species and the prohibition on the capture of suckling calves and female whales accompanied by their calves. Furthermore, the Commission encourages, co-ordinates and funds whale research, publishes the results of scientific research and promotes studies researched into related matters such as the humaneness of killing operations. In the year of 1982, the IWC had decided that there should be a pause in commercial whaling from 1985/1986 season onwards. This pause is often referred as the commercial whaling moratorium and is still in place today.

### Japan



Ever since the International Whaling Commission had banned whaling in the Antarctic Ocean, Japan has nevertheless, continuously hunted and killed whales for mainly commercial use. The Asian country has severely faced massive backlash from anti-whaling organisations and countries. It has conducted its whaling program under scientific research permits, arguing that its purpose is to establish the size and dynamics of whale population.

Countries against Japan's whaling program have passed non-binding resolutions via the IWC to stop whaling, while Japan claims the whale stocks for some species around Antarctica are enough to continue its whaling program. On the 31<sup>st</sup> of May 2010, Australia submitted formal proceedings against Japan in the International Court of Justice (ICJ) to stop whale hunting in the Antarctic Ocean entirely. The hearing commenced in June 26<sup>th</sup>, 2013, at the ICJ, and oral pleadings by Australia, Japan, and New Zealand will be heard over three weeks. On March 31<sup>st</sup>, 2014, the UN's International Court of Justice (ICJ) has ruled that Japan must temporarily halt its whaling programme in the Antarctic. The ICJ had decided, by twelve votes to four, that Japan should withdraw all permits and licenses for whaling in the Antarctic and refrain from issuing any new ones. In 2018, a hunt led by a Japanese boat ended up killing the mammals in the Southern Ocean, including 122 pregnant females.

## Norway

Norway is still one of the many countries which continue to whale and has a thriving fur industry. Last year, it exported between 258 tons of fox skins and 1,000 tons of mink skins to the European Union, according to the press release. When the IWC put a moratorium on whaling, Norway and Iceland registered objections.

## The Antarctic Treaty System (ATS)

The Antarctic Treaty System (ATS) is the main remedy for the international governance of Antarctica. The treaty was signed in Washington on the 1<sup>st</sup> of December 1959 by the twelve countries whose scientists had been active in and around Antarctica during the International Geophysical Year (IGY) of 1957-58. These 'twelve countries' consisted of Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, United Kingdom, United States and Russia. It entered into force in 1961 and has since been acceded to by many other nations. The total number of Parties within the Treaty is now 54. The treaty applies to the area south of 60 degrees south latitude and is surprisingly short. Examples of articles within the treaty include, Antarctica should be used solely for peaceful purposes only: military actions are specifically prohibited as well as nuclear explosions and the disposal of radioactive waste.



The system now includes numerous organisations such as NGOs and scientific institutions which all contribute to the decision of activities taking place in Antarctica. These supplementary agreements have added to the responsibility of protection, examples include: the protection of the Antarctic environment and the conservation of plants and animals. Ever since coming into force on the 23<sup>rd</sup> of June 1961, the treaty has been recognised as one of the most powerful and effective international agreements.

### **The Protocol on Environmental Protection to the Antarctic Treaty 1991**

The protocol, also known as the Madrid Protocol, was negotiated by the United Nations and treaty members at an Antarctic treaty conference in 1991. The protocol's main reason for establishment is to give extra protection to the environment of Antarctica, especially against the threat of mineral exploration. It was only negotiated after several years of international talks on governing mineral resource activities in Antarctica. Examples of articles written in the protocol include designates Antarctica as 'A natural reserve, devoted to peace and science', prohibits mining or any mineral resource exploration, including exploration of the continental shelf and subjects all activities to being assessed and controlled for their environmental impacts.

The Madrid Protocol was ratified by all members and finally came into force in 1998. The ban on mining is of indefinite duration and strict rules for modifying it have been fixed however, the prohibition can only be modified if all parties/organisations agree. Only until 2048 can the Protocol can be modified by a unanimous agreement of all consultative parties to the Antarctic Treaty. The protocol also created a Committee for Environmental Protection responsible for advice, inspection and reporting. The scope of inspections under the Protocol includes inspection of stations, ships, aircraft and landing areas, unfortunately with a lesser focus on maritime areas, which are equally important.

### **The Antarctic and Southern Ocean Coalition (ASOC)**

This umbrella group consists of 30 different NGOs from all around the world and was founded in 1978. It was formed in response to the concern that members of the Antarctic Treaty were meeting to negotiate a framework for mineral and gas exploitation in Antarctica. Some of their initial objectives were to conclude and establish negotiations of the world's first 'ecosystem as a whole' treaty on fishing and prevent oil, gas and minerals exploitation by blocking ratification of the proposed mineral convention.

### **The Convention on the Conservation of Antarctic Marine Living Resources**



The Convention on the Conservation of Antarctic Marine Living Resources, also referred to as CCAMLR, is currently part of the Antarctic Treaty System (ATS). The Convention was signed on the 1st of August 1980 and came into force on the 7th of April 1982 by the Commission for the Conservation of Antarctic Marine Living Resources, headquartered in Tasmania, Australia. Examples of countries which signed the convention are Belgium, The United States of America, The United Kingdom, New Zealand and France. The Convention's main goal is to preserve the marine life and environmental integrity in and around the continent of Antarctica. Its main reason for establishment was due to concerns and worries that an augmentation of krill could possibly have a massive effect on populations of marine life in Antarctica which are dependent upon krill for food.

The CCAMLR also created the Ecosystem Monitoring Program to further analyze and monitor the effects of fishing and harvesting of species in the area.

## Timeline of Key Events

|                               |   |
|-------------------------------|---|
| December 2 <sup>nd</sup> 1946 | Establishment of the International Whaling Committee  |
| December 1 <sup>st</sup> 1959 | Date when the Antarctic Treaty was signed   |
| June 23 <sup>rd</sup> 1961    | Date when the Antarctic Treaty went into force  |
| June 2 <sup>nd</sup> 1964     | Date when the Agreed Measures for the Conservation of Antarctic Fauna and Flora was signed            |
| June 13 <sup>th</sup> 1964    | Date when the Agreed Measures for the Conservation of Antarctic Fauna and Flora came into force       |
| June 1 <sup>st</sup> 1972     | Date when the convention for the Conservation of Antarctic Seals was signed                           |
| March 11 <sup>th</sup> 1978   | Date when the Convention for the Conservation of Antarctic Seals came into force                      |
| August 1 <sup>st</sup> 1980   | Date when the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) was signed |





April 7th 1982 Date when the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) came into force

1989 Date when the CCAMLR had put together the Ecosystem Monitoring Program (EMP)

October 4th 1991 Date when the Protocol on Environmental Protection to the Antarctic Treaty was signed

January 19th 1998 Date when the Protocol on Environmental Protection to the Antarctic Treaty entered into force

## Previous Attempts to solve the Issue

### Greenpeace

Antarctica is the only continent that remains untouched by human interference . Its role in protecting biodiversity is significant but scientists can also use the unique environment to gain insight into pollution and climate change in a way that cannot be achieved anywhere else. However, in the early 1980s, commercial exploitation threatened the delicate ecosystem. There is strong evidence of the existence of oil and mineral deposits under the ice cap, meaning governments and companies were lining up to start prospecting.

The idea for a campaign to make Antarctica a 'World Park' was first suggested by Greenpeace in 1979. Greenpeace lobbied their governments to take a responsible position protecting the Antarctic, joining forces with Non-Governmental Organisations and eliciting support from personalities including Ted Turner and Jacques Cousteau. Gradually, more and more treaty signatories were persuaded of the merits of making Antarctica a World Park. This led to members of the Antarctic Treaty agreeing to adopt a new Environmental Protocol, including a 50 year minimum prohibition on all mineral extraction. It showed that people power was able to overcome commercial interests, sending a message that Antarctica could not be mined for profit with a socially conscious public around to fight back.

### Convention for the Conservation of Antarctic Seals (CCAS)



The entry into force of the CCAS brought the Southern Ocean wildlife under the regulatory rules of the Antarctic Treaty System for the first time. The first article of the Seals Convention establishes the regulated area to the seas south 60 degrees S. In addition, the agreement sets goals intending to prevent the overexploitation of different seal species whilst *“ensuring acquisition of the scientific information necessary to framing sound management plans”* (Peterson, 1988:104). The CCAS calls for the total protection of the fur, Southern elephant, and Ross seal species and sets annual hunting limits on the Crabeater, Leopard, and Weddell seal species (Annex, CCAS). Lastly, the CCAS prohibits sealing yearly from the 1st of March to the 31st August, and designates three seal reserves (seal breeding areas or sites of long-term scientific interests) in which it is prohibited to hunt as well as capture seals (Annex, CCAS).

### Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR)

The CCAMLR is an ambitious instrument which aims to conserve Antarctic marine populations of *“Finfish, molluscs, crustaceans, and all other species of living organisms, including birds”* (Article 1, CCAMLR). The convention was adopted at the Second Special Meeting in the capital city of Australia, Canberra, in May, 1980, and entered into force on 7 April 1982.

The articles contained within the CCAMLR take a radical approach to the management of Antarctica’s marine living resources by striving to maintain an ecological balance of the entire marine ecosystem. Therefore, contracting parties to the convention are forced to ensure the *“maintenance of the ecological relationships between harvested, dependent and related populations of Antarctic marine living resources (while working toward) the restoration of depleted populations”* (CCAMLR, Article II, 3(b)). Contracting parties are also charged with the *“prevention of changes or minimization of the risk of changes in the marine ecosystem which aren’t potentially reversible over two or three decades”* (CCAMLR, Article II, 3(c)).

## Possible Solutions

The Environmental Protocol of the Antarctic Treaty, sometimes called the ‘Madrid Protocol’, became law in 1998 as mentioned before. One of the ways in which the protocol protects Antarctica is by only allowing visitors to Antarctica by member nations as long as they’re given a permit to do so. The granting of permit is currently dependent on the visitors agreeing to follow certain rules and regulations. Each nations rules aren’t detailed the same



however, they are very similar in the general principles in that they adhere to the Antarctic Treaty. For example, British citizens require a permit from the Secretary of State for Foreign & Commonwealth affairs for certain activities.

Antarctica is one of the most untouched and clean environments in the world; the IAATO encourages tourists to leave zero trace of their visit as waste can damage the environment in various ways such as, entangling or poisoning animals and introduce deadly diseases. They also suggest that tourists should carry storage containers to remove all waste from the continent for example using sealable barrels and dry bags to bring out your biodegradable wastes plus cans, bottles, household rubbish, used oil, coolant and dirty bilge water. For sewage, people could use their holding tank, especially when in harbour. If there aren't any, keep your toilet paper onboard. Nothing rots (not even toilet paper) in the cold waters of Antarctica.

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A whale is captured by the Yushin Maru, a Japanese Harpoon Vessel. This photograph was taken by Customs Border Protection Service', Commonwealth of Australia on February 8<sup>th</sup>, 2008. Despite the 1986 ban on whaling instated by the International Whaling Commission, Japan has continued its pursuit of large-scale whaling in the Antarctic Ocean and is facing strong opposition and hate by anti-whaling countries.

