

# Global Systems and Global Governance

1. The geography of Antarctica
2. Threats to Antarctica arising from climate change, fishing and whaling, the search for mineral resources and tourism and scientific research.
3. Critical appraisal of the governance of Antarctica including the UN, UNEP, International Whaling Commission, Antarctic Treaty, Protocol on Environmental Protection to the Antarctic Treaty and the IWC Whaling Moratorium.
4. The role of NGOs in monitoring threats and enhancing protection of Antarctica
5. Analysis and assessment of the geographical consequences of global governance.

## Learning Objectives:

- \* To be able to describe the human and physical geography of Antarctica
- \* To be able to discuss threats to Antarctica
- \* To be able to critically appraise the governance of Antarctica
- \* To be able to name different non-governmental organisations protecting Antarctica
- \* To assess geographical consequences of global governance

### Key terms:

Antarctic Convergence

NGO

UN, UNEP, IWC

Global Common

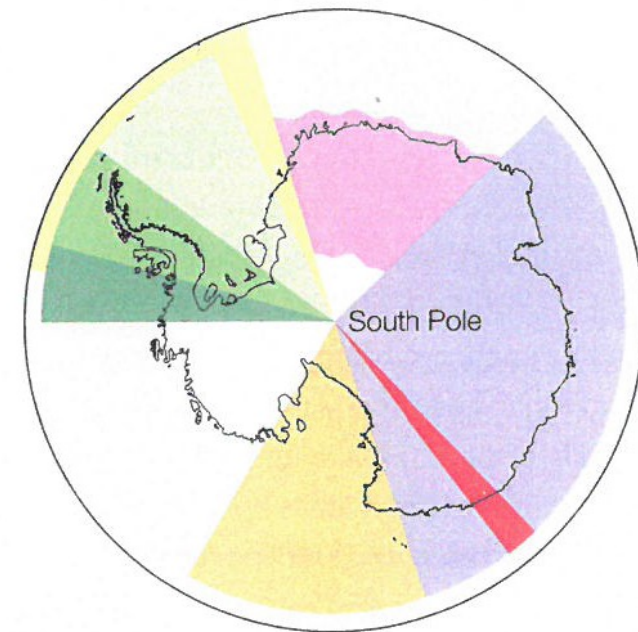
Governance

Antarctic Treaty

# Governance – The Antarctic Treaty

As a global common, Antarctica has no government to manage its affairs or to protect its interests. It is not a nation state, although over the years seven countries have made claims to segments of it (Figure 1) – the exact legality of the claims has never been comfortably clarified. (You only need to consider the Falklands (Malvenas) war of 1982, and the overlap between Britain's and Argentina's claims to understand why!) Any nation's claim to sovereignty or 'ownership' is disputed by all others, but the areas assigned are recognised as research zones where the individual countries have established scientific bases. Interestingly, the USA has never made a claim, but like Russia 'reserves the right to' and maintains research facilities which, under international law, is theoretically a basis to do so.

Against a backdrop of underlying Cold War geopolitics, the Antarctic Treaty was drafted in 1959 and ratified by the 12 original member nations to come into force in June 1961. The treaty formalised the notion that Antarctica does not 'belong' to any single nation. Instead, it designated the whole area south of 60° S latitude as an area where countries would work together for the common causes of scientific research.



Key		
United Kingdom	Chile	France
Argentina	Norway	New Zealand
Argentina & Chile	Australia	

**Figure 1** Territorial claims to Antarctica

Additional information on the ATS can be found on pages 342 to 345 in the AQA Hodder VLE textbook and page 56 in the Oxford textbook

- <https://www.youtube.com/watch?v=sKpA4ioawyY>

# Governance – The Antarctic Treaty

## The Antarctic Treaty:

- stipulates that Antarctica be used exclusively for peaceful purposes; military activities are banned
- guarantees continued freedom to conduct scientific research
- promotes international scientific co-operation including the exchange of research plans and personnel and sharing of research results
- freezes any claims to sovereignty for the duration of the treaty and prohibits any new or enlarged claims
- prohibits nuclear explosions and the disposal of radioactive waste
- allows ships, stations and equipment to be inspected by observers to ensure compliance
- requires parties to give advance notice of their expeditions
- includes a dispute settlement procedure and a review mechanism by which the treaty can be modified.

Members of the AT committed to operate on a consensus basis, regardless of size or status. Other nations were allowed to become signatories to the AT but to be able to vote had to demonstrate 'substantial scientific activity', such as establishing a research station in Antarctica.

- <https://www.youtube.com/watch?v=sKpA4ioawyY>

# Governance – The wider Antarctic Treaty System

The governance of Antarctica was contested by some nations (AT members and non-members) who raised concerns in the UN General Assembly about its accountability, suggesting that it was in danger of **succumbing to pressures of resource development**. Under the legal provision of the 'common heritage of mankind', AT members accepted proposals from the UN that the United Nations Environment Programme (UNEP) would extend the Treaty by adding agreements that would strengthen and secure protection for Antarctica. **This led to the establishment of the broader Antarctic Treaty System (ATS).**

The system includes the Antarctic Treaty at its core together with a number of other related agreements

- The **Protocol on Environmental Protection to the Antarctic Treaty** (Madrid, 1991) known as the **Madrid Protocol**
- Two separate conventions dealing with the **Conservation of Antarctic Seals**
- The **Conservation of Antarctic Marine Living Resources (CCAMLR)**

**NGOs and others contribute to decision making regarding activities taking place. The Treaty also provides that any member of the UN can accede to it, thus membership continues to grow.**



# Governance – The Antarctic Treaty System

Recognising that disputed status needed to be addressed, scientists appeal to UN to establish an **International Geophysical Year (IGY)** to promote scientific cooperation. Scientists from 12 countries with already established scientific research stations worked cooperatively on a multinational research programme, which was a great success.

Increased pressure and demand for opening up of Antarctica's resources; new states including China and India had joined the AT. Members began to negotiate new regimes for fishing rights and also considered a Mineral Convention to allow mining. Countries in the Global South complained to UN General Council that a small group were trying to exploit resources in an area of 'common heritage', which led to further protection and development of the wider **Antarctic Treaty System (ATS)** with added agreements.

The **Southern Ocean Whale Sanctuary** was designed by the International Whaling Commission. 23 members supported it, but Japan opposed it.

Japan leaves the IWC. China and Russia are both in favour of greater exploitation of fishing resources and in 2018, together with Norway, blocked plans for an even larger MPA in the Weddell Sea. Other parties want to see more protected areas.

Pre-WW2

Seven countries make territorial claims on sections of Antarctica – based on exploration history (UK, Norway) or being supra-adjacent nations (Chile, Argentina, France, Australia and New Zealand) – these claims were never agreed but they are still known as 'claimant countries'.

1950s:  
1957–1958  
(IGY)

1959–1961

The success of the IGY led to the 12 nations involved (the seven 'claimants' plus Belgium, Japan, South Africa, Soviet Union and USA) resolving the issue by signing the **Antarctic Treaty (AT)**. Declared that Antarctica and the surrounding ocean up to 60°S would be a zone of peace and cooperation, guaranteeing free access and research rights to all countries.

1980s

1991–1998

The **Protocol on Environmental Protection to the Antarctic Treaty** (Madrid Protocol) was signed (1991) and ratified (1998), giving further protection to Antarctica, particularly from mining, until 2048.

1994

2017

The world's largest **Marine Protected Area (MPA)** was designated in the Ross Sea by the **Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)**. 72 percent of this is fully protected.

2018–  
present

Figure 7.42 Timeline of key developments in the governance of Antarctica

# The wider Antarctic Treaty System (An IGO)

From the information so far, take notes on the following:

1. Its history.
2. Which countries have signed it.
3. How it helps protect the environment.
4. How it allows use of the region.
5. The future of the treaty.

**Watch the videos and add to your notes:**

[https://www.youtube.com/watch?v=wwrvt1mzxyg&feature=emb\\_logo](https://www.youtube.com/watch?v=wwrvt1mzxyg&feature=emb_logo) (UK)

[https://www.youtube.com/watch?v=\\_JVgijO9O84](https://www.youtube.com/watch?v=_JVgijO9O84) (AUS)

Hilary Clinton explaining the ATS:

<https://www.youtube.com/watch?v=VL3WStZQYml>

# The protection of Antarctica

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As Antarctica is at risk from the factors we discovered above, it needs to be protected to ensure stability for both its environment and wildlife. There are a number of measures in place to ensure this protection:

- **Antarctic treaty 1959**

The Antarctic Treaty of 1959 was signed by 12 countries to ensure that:

- Antarctica is kept peaceful (not to be used for military purposes)
- The continent may be used for scientific research (and findings must be accessible)
- Territories and claims must be respected
- No nuclear or radioactive waste to be disposed of on Antarctica
- All equipment and transport methods used on Antarctica must be inspected and approved
- Scientists must give an advanced warning of their desire to research on Antarctica

- **Protocol on Environmental Protection to the Antarctic Treaty 1991 (Madrid Protocol)**

A few extra measures were added to ensure the protection of Antarctica in the Madrid Protocol:

- Prohibition of mineral or natural resource exploration and extraction
- Activities on Antarctica will have to undergo an Environmental Impact Assessment (EIA)
- Extends liability for environmental damage
- Makes sure all waste is removed from the continent and returned to the country of its owner's origin



# Governance – The Protocol on Environmental Protection (Madrid 1991)

The protocol, to run until 2048, proclaimed Antarctica as a 'natural reserve, devoted to peace and science'.

✓ **Figure 3** Specific clauses of the Protocol on Environmental Protection

Clause	Purpose
Environmental impact assessment	<ul style="list-style-type: none"> <li>Any planned activities to be assessed in advance with agreement required should significant risks be apparent</li> </ul>
Flora and fauna	<ul style="list-style-type: none"> <li>Preventing the removal of, or interference in, native flora and fauna</li> <li>Prohibiting the introduction of non-native species</li> <li>Identifying and designating Specially Protected Species</li> </ul>
Waste management	<ul style="list-style-type: none"> <li>Identifying types of waste that have to be removed</li> <li>Establishing rules for the storage and disposal of waste</li> <li>Planning for the removal of wastes of past activities</li> </ul>
Marine pollution	<ul style="list-style-type: none"> <li>Restricting the (marine) use of heavy fuel oil</li> <li>Prohibiting the discharge of oil, noxious liquid substances and garbage in the Antarctic Treaty area*</li> <li>Defining rules for the discharge of sewage, ship retention and emergency preparedness and response</li> </ul>
Protected areas	<ul style="list-style-type: none"> <li>Identification and protection of areas of outstanding environmental, scientific, historic and/or aesthetic importance as Antarctic Specially Protected Areas (ASPAs) or Antarctic Specially Managed Areas (ASMA)</li> <li>Establishing an official list of Historic Sites and Monuments (HSMs)</li> </ul>
Liability	<ul style="list-style-type: none"> <li>Establishing rules and procedures to cover potential environmental emergencies related to scientific research, tourism and so on</li> <li>Ensuring operators prepare contingency plans for any such emergencies</li> </ul>

\*The Antarctic Treaty System area includes over 20 million km<sup>2</sup> of the Southern Ocean, extending from the Antarctic coast to 60°S latitude. The International Maritime Organisation (IMO) designated these waters a 'Special Area' in 1990

- Pressures to exploit Antarctica for mineral resources led to a more rigorous protocol aimed at truly protecting the environment agreeing to:
  - Ban all mineral resource activity
  - Promote monitoring of the fragile ecosystems



# Governance – ATS Summary Quiz

a) **What is the 1959 Antarctic Treaty?**

b) **List three features of the 1959 Antarctic Treaty.**

c) **To what extent is the 1959 Antarctic Treaty a good method of controlling global governance of the continent? Explain your answer giving reasons.**

**Briefly outline the purpose of the 1991 Protocol on Environmental Protection to the Antarctic Treaty.**

# Intergovernmental Organisations (IGOs) and The ATS

<p><b>How is the UN involved with Antarctica?</b></p>	<p>The UN Environment Programme legally recognises Antarctica as a global common which, along with the high seas, is under special protection. The UN Convention on the Law of the Sea (UNCLOS) keeps track of the Antarctic Treaty systems to ensure they are being honoured. The UN also instigated the Madrid Protocol.</p>	
<p><b>a) What is the 1959 Antarctic Treaty?</b></p>	<p>A treaty signed by 12 countries in 1959 in order to protect the status of Antarctica as a peaceful environment.</p>	
<p><b>b) List three features of the 1959 Antarctic Treaty.</b></p>	<p><b>1.</b></p>	<p>All military activity is banned on Antarctica.</p>
	<p><b>2.</b></p>	<p>Scientific research is allowed on Antarctica and findings must be available for everyone to see.</p>
	<p><b>3.</b></p>	<p>Nuclear explosions and the disposal of radioactive waste are banned on Antarctica.</p>
<p><b>c) To what extent is the 1959 Antarctic Treaty a good method of controlling global governance of the continent? Explain your answer giving reasons.</b></p>	<p>The 1959 Antarctic Treaty is a good method of controlling global governance as it has been relatively successful. Countries have kept to the treaty and any disagreements have been peacefully resolved. However, it can be argued that as the treaty was signed in 1959, it may need to be updated as times have changes since then, especially with regards to how we view climate change.</p>	
<p><b>Briefly outline the purpose of the 1991 Protocol on Environmental Protection to the Antarctic Treaty.</b></p>	<p>The 1991 Protocol on Environmental Protection to the Antarctic Treaty, also known as the Madrid Protocol, was set up by the UN to ensure the protection of the environment of Antarctica. In particular, the protocol was set out to address mineral mining and exploration. The protocol prohibits mining for minerals or mineral exploration on Antarctica and stipulates that all planned activities to be carried out on Antarctica must go through an environmental assessment.</p>	

# Governance – systems for inspection

- **Inspection and observation of all operations on Antarctica is compulsory** under the terms of the Treaty.
- Antarctica has no permanent population and so no government. All persons present are citizens of a nation outside of Antarctica and under that nation's jurisdiction.
- **Prosecutions** against Treaty rules are the responsibility of the nation through the **Antarctic Treaty Consultative Meetings**
- **Inspections** are now carried out under the more rigorous **Madrid Protocol** – stations, ships, aircraft and landing areas.
- Environmental Impact Assessments are carried out on new proposed operations.



# Governance - NGOs

**Table 7.18** International conservation organisations in Antarctica

Organisation	Background	Role and influence
International Union for Conservation of Nature and Natural Resources (IUCN)	An umbrella organisation that includes both government and NGO bodies	<ul style="list-style-type: none"> <li>• A respected knowledge-based coalition of expert groups</li> <li>• Shares advocacy on some issues but primary role is to provide advice on conservation issues</li> <li>• Has had 'invited expert' status since 1987 and was first NGO to gain formal observer status on the full ATCM</li> <li>• Offers expertise but not a decision maker</li> </ul>
Antarctic and Southern Ocean Coalition (ASOC)	<p>A coalition group of over 20 NGOs interested in the protection of the Antarctic environment, including Friends of the Earth, the Pew Charitable Trusts, Greenpeace and WWF. ASOC members pursue their own individual organisational Antarctic work, in addition to working collectively through the coalition</p> <p>The only NGO group that dedicates all its time to Antarctica and the Southern Ocean and the only environmental NGO with official status at Antarctic governance meetings</p>	<ul style="list-style-type: none"> <li>• Provides co-ordination between national NGOs to develop shared positions on Antarctic conservation issues</li> <li>• Gradually earned respect from ATS members and gained observer status in the CCAMLR meetings</li> <li>• ASOC and its members participate in a wide range of activities and campaigns related to Antarctic environmental protection. E.g., from 1987–1991, Greenpeace established an NGO base where it drew attention to the need to protect Antarctica from oil and gas exploitation</li> <li>• Helped to establish the partner <b>Antarctic Ocean Alliance (AOA)</b> that was instrumental in supporting CCAMLR to establish the <b>Ross Sea Marine Protected Area (MPA)</b></li> <li>• ASOC wants to see ATS members doing more to manage human activities and to protect biodiversity, including by establishing more terrestrial and marine protected areas</li> </ul>

The role of Greenpeace ( case study): Click on the link: <https://www.greenpeace.org.uk/challenges/protect-the-antarctic/>

# Antarctic and Southern Ocean Coalition



This is a group of NGOs that have formed an alliance (e.g. WWF). Since 1991 ASOC has observer status for the Antarctic Treaty System.

Put the following aims of ASOC in order of importance:

Negotiating a legally binding code for all ships in the Southern Ocean.	Establishing a network of marine reserves.	Regulating fishing in the Southern Ocean.	Regulating tourism in the region.	Strengthening the Whale Sanctuary.	Mitigating the effects of climate change.
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# Future of governance

Analyse and assess the geographical consequences of global governance with reference to Antarctica:

- Use the website and page 59 in the Oxford textbook to discuss the questions below: <https://www.asoc.org/advocacy/antarctic-governance/overview-of-antarctic-governance>

1. How does **governance** of Antarctica impact on our lives – here as students and across the globe?
2. **What do people think about the future of Antarctica? Choose a view you support and one you disagree with.**
3. Discuss plans to develop Antarctica after the expiry of the ATS.



# Summary



What will the region of the Antarctic and the Southern Ocean be like in 50 years time?

In groups discuss what you think will happen to:

1. The biodiversity.
2. The climate.
3. The population.
4. The human use of the continent.

# Further reading / resources

- [www.discoveringantarctica.org.uk](http://www.discoveringantarctica.org.uk) – The British Antarctic Survey
- [www.asoc.org](http://www.asoc.org) – Antarctic and Southern Ocean Alliance
- <https://www.rgs.org/schools/teaching-resources/ice-odyssey/>
- [Cool Antarctica](#) is also good.
- [Scientific Committee on Antarctic Research \(SCAR\)](#) develops and coordinates scientific research efforts on Antarctica.
- Garrington, S. (2009) 'The exploitation of the Southern Ocean', *Geofile*, AQA3.
- Nash, S. (2008) 'Antarctica – politics, resources and tourism: 'More than ice and penguins'', *Geofile*, AQA1.
- NASA has been monitoring ice break ups on Antarctica [NASA: Antarctica's Larsen B Ice Shelf](#)
- See also [Ecowatch: Nansen ice shelf Antarctica](#) and [Live Science: Antarctica Larsen ice shelf collapsing](#),
- [International Association of Antarctic Tour Operators](#).
- [News and teaching resources about Antarctica](#) from The Guardian and British Antarctic Survey materials British Antarctic Survey materials from [Greenpeace](#).

# Further reading / resources

- Videos to watch:
- [https://www.youtube.com/watch?v=PXDUQd1I\\_h8](https://www.youtube.com/watch?v=PXDUQd1I_h8) 1 hour video on climate change impacts on Antarctica and rest of the world
- Governance - <https://www.asoc.org/advocacy/antarctic-governance/overview-of-antarctic-governance>
- Cool Geography – Antarctica (interactive video and games):  
[http://www.coolgeography.co.uk/gcsen/GCSE\\_LW\\_Antarctica.php](http://www.coolgeography.co.uk/gcsen/GCSE_LW_Antarctica.php)