

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

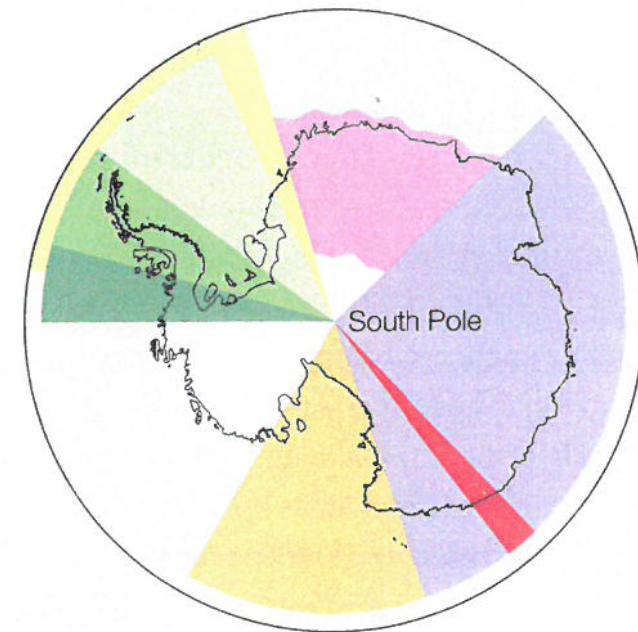
Governance

Antarctic Treaty

Governance – The Antarctic Treaty System

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.

Additional information on the ATS can be found on pages 330 to 333 in the AQA Hodder textbook and page 56 in the Oxford textbook



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

Figure 1 Territorial claims to Antarctica

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

The Antarctic Treaty System

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 (UK)

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

Hilary Clinton explaining the ATS:

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

The protection of Antarctica

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

*The Antarctic Treaty System area includes over 20 million km² 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.

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

Using page **57-58** in the **Oxford textbook** and **page 333-334** in the **Hodder textbook**:

- What does the work of NGOs in Antarctica involve in monitoring threats and enhancing protection?
- The role of Greenpeace (case study): Click on the link: <https://www.greenpeace.org.uk/challenges/protect-the-antarctic/> , make brief notes on how Greenpeace is making a difference
- Which NGOs are involved?
- Write a list of bullet point to explain what the Antarctic and Southern Ocean Coalition is and how it is involved with Antarctica. <https://www.asoc.org>
 - The coalition is comprised of a number of well-known environmental campaign groups including Friends of the Earth, Greenpeace and the Worldwide Fund for Nature (WWF).

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. Discuss plans to develop Antarctica after the expiry of the ATS.
3. Complete activities 1-3 on page 59 of the Oxford textbook.

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.

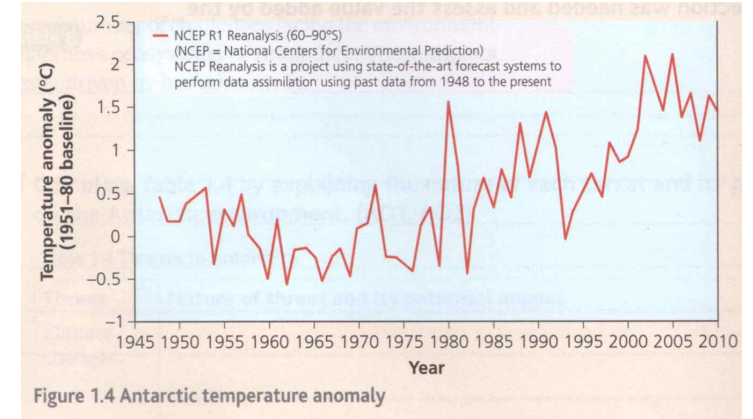
Review Questions

- 1 Explain the meaning of the term 'global commons'.
 - 2 Study [Figure 7.28](#). Describe the variations in temperature in Antarctica and suggest reasons for these variations.
 - 3 Briefly explain the impacts of the following on Antarctica:
 - a fishing and whaling
 - b climate change.
 - 4 Outline the ways in which Antarctica has been managed. How successful have these been?
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Discuss the contribution of non-governmental organisations (NGOs) to the governance and protection of Antarctica. (Hodder)

Exam Questions

1) Using Figure 1.4 showing the trends in Antarctic temperature change and your own knowledge, assess the threats posed by global climate change on Antarctica. (6 marks)



2) Using Table 7.8 and Figure 7.49 analyse the trends shown for tourist visitors to Antarctica over the 12 seasons and outline the threats posed by these visitors to the Antarctic ecosystem. (6 marks)

Table 7.8 Tourist visitors to Antarctica 2002–2014

Year	02–03	03–04	04–05	05–06	06–07	07–08	08–09	09–10	10–11	11–12	12–13	13–14
Landed	13,571	19,771	22,926	25,191	29,576	33,054	27,206	21,622	19,445	22,122	25,284	27,735
All	17,543	27,537	27,950	29,823	37,552	46,069	37,858	36,875	33,824	26,509	34,354	37,405

Note: The Antarctic tourist season is in the austral (southern hemisphere) summer, from November to March, and spans part of two calendar years, so seasons are referred to as 2012–2013.

Source: coolantarctica.com

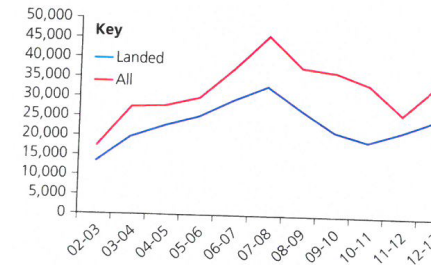


Figure 7.49 Tourist visitors to Antarctica 2002-2014

Source: coolantarctica.com

3) “NGOs play the most important role in protecting Antarctica”. How far do you agree with this view (20 marks, Zig Zag Paper C) Write your answer on separate paper.

4). ‘In a globalising world the use of the global common of Antarctica can never be sustainable.’ How far do you agree with this view? (20 marks, AQA SAM)

5) Evaluate the degree to which sustainability is possible when it comes to managing the global commons of Antarctica and the seas around it. [20 marks, Student Guide].

Extra Questions

- 7 How successful has the Antarctic Treaty System been in protecting Antarctica from its many threats?

A level style question from Oxford: **Analyse the roles of international governmental organisations and NGOs in the governance of Antarctica and assess their effectiveness (20 marks)**

Further reading / resources

- www.discoveringantarctica.org.uk – The British Antarctic Survey
- 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 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