

Key Stage 5 – Conflict case study

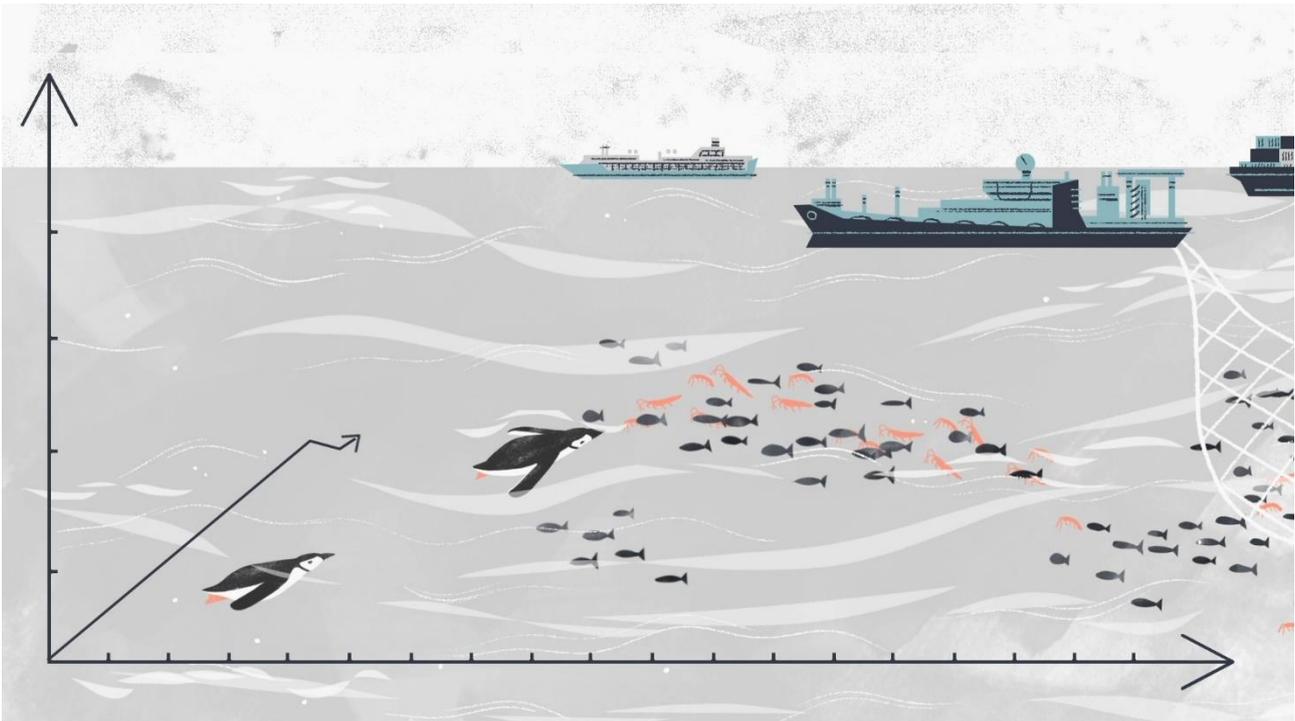
Notes for teachers

At a glance

In many areas across the globe there is constant conflict between supplying human needs and the conservation of species and habitats.

In this activity, students explore a group of islands in the Southern Atlantic Ocean (South Georgia and the South Sandwich Islands), which are a habitat to major populations of seabirds and marine mammals but are particularly sensitive to fishing, climate change and other human disturbances. They evaluate conflicting evidence to decide if policy makers should extend the Marine Protected Area (MPA) around the islands.

The activity can easily be adjusted to be an at-home activity or homework.



Learning Outcomes

- Students show understanding of the need to manage the conflict between human needs and conservation.
- Students evaluate conflicting evidence and data concerning issues relating to conservation to form an informed opinion.

Each student will need

- Copy of presentation 'conflict case study' available as a PowerPoint, or as a Google slides document online [here](#)
- Copy of student worksheet



Possible Lesson Activities

1. Starter activity

- Provide students with access to the student worksheet and the 'conflict case study' presentation.
- They take a journey to South Georgia and the South Sandwich Islands (SGSSI) by clicking on the link on slide 2. Students can fill in the 'location' box on the student sheet.
- The video on slide 3 will show them the animal life on one of the islands, Zavodovski, which includes the world's largest chinstrap penguin colony (~1.5 million pairs).
- Discuss why it is important that these islands are protected.

2. Main activity: Collecting information

- Students complete the activity on slide 3 then work through slides 4-5 of the presentation, collecting information and filling in the case boxes on the sheet.
- Go through the information they collected, suitable answers are given below.

3. Main activity: Conflict

- Explain that there have been calls to fully protect the ocean around the South Sandwich Islands. In fact, there was a campaign led by the coalition 'Great British Oceans' that put this argument to the government. As a result, the Marine Protected Area (MPA) was extended in 2018, but it still does not fully protect the islands.
- Slide 6 of the presentation asks the students to look at information from several different sources in order to form their own opinion about if the area should be extended further. They should complete the student sheet.

4. Plenary

- Take a class vote on whether they think the MPA should be extended further.
- Ask some volunteers to share their opinion.



Possible answers



Key Stage 5

Conflict case study

Student worksheet

Animals present
Phytoplankton and zooplankton Pelagic fish and squid Benthic invertebrate fauna Demersal fish and cephalopods Marine mammals (seven species of large cetacean) and seals Penguins (five species) Albatross, petrels, and other birds.

Location
Southern Atlantic Ocean

Protection measures
23% of the MPA is a no-take zone. Antarctic krill fishing is not allowed in the winter period between May and September. A ban on the carriage and use of heavy fuel oil (HFO). Total ban on all fishing using bottom trawls across all 1.24 million km ² , the prohibition of all bottom-fishing activities at depths shallower than 700m and greater than 2250m and an extensive network of benthic closed areas designed to protect vulnerable habitats and species.
How they reduce threats
Increases amount of food in the ocean for other species such as seals and penguins. Reduces pollution. Protection of habitats.

Threats to biodiversity
Fishing. Removes food for other animals. Visiting vessels by tourists. Pollution in the form of wrecked vessels, discharged oil or fuel, discarded rubbish, or fishing gear. Non-native species that may be attached to the hulls of visiting vessels. They will compete with native species for space and resources. Climate change - the Southern Ocean is warming. This is causing glaciers to melt, which is adding freshwater to the saltwater ocean and changing the physical and biological properties, which affects marine life. Increases in temperature also affects krill population, which will have effects on other populations.

Conflict: should the whole area around the South Sandwich Islands be fully protected?	
Reasons for	Reasons against
An important habitat for Antarctic marine predators. Will provide a long-term sanctuary for recovering and migratory species, including whales. The area may host species which are unique or rare elsewhere. Provide an opportunity for monitoring the effects of climate change on marine communities away from other pressures such as fishing. To futureproof the area from exploitation.	Might restrict scientists visiting the islands to monitor changes Fisheries are sustainable, and follows the rules set out for the conservation of Antarctic marine living resources Fishing is a source of money for the island's government, which it then invests in ways of protecting biodiversity. Scientific research fishing can no longer take place. If fishing can't take place around SGSSI, fishing vessels will go elsewhere, including the Antarctic Peninsula, where there are also vulnerable populations. The fishing there will be more intense, as all the vessels are being concentrated in one area, as opposed to spread out.
My opinion:	

Weblinks on slides

Slide 3

The case for a fully protected South Sandwich Islands marine

reserve: <https://www.youtube.com/watch?v=8qc5xuKleYc>

South Georgia and the South Sandwich Islands Marine Protected Area Management Plan

<http://www.gov.gs/docsarchive/Environment/Marine%20Protected%20Area/MPA%20Management%20Plan%20v2.0.pdf>

Slide 4: Oxford Sparks video

www.oxfordsparks.ox.ac.uk/content/seabird-monitoring-witnesses-wild

Slide 5: South Georgia & the South Sandwich Islands MPA Enhancements

<http://www.gov.gs/south-georgia-and-the-south-sandwich-islands-mpa-enhancements/>

Slide 6

Source 1: <https://greatbritishoceans.org/2018/06/28/ssi/>

Source 2: <https://www.bbc.co.uk/news/science-environment-41355049>

www.oxfordsparks.ox.ac.uk/content/seabird-monitoring-witnesses-wild



Source 3: <http://www.gov.gs/fisheries/overview/>

Source 4: <https://www.gov.gs/information/about-sgssi/>