

# Introduction to Antarctica

- Antarctica is the 5<sup>th</sup> largest continent
- It is 25% larger than Europe
- It is the worlds highest continent
- The average height of the land is 2300 metres
- During the winter the sea ice freezes and doubles the size of Antarctica

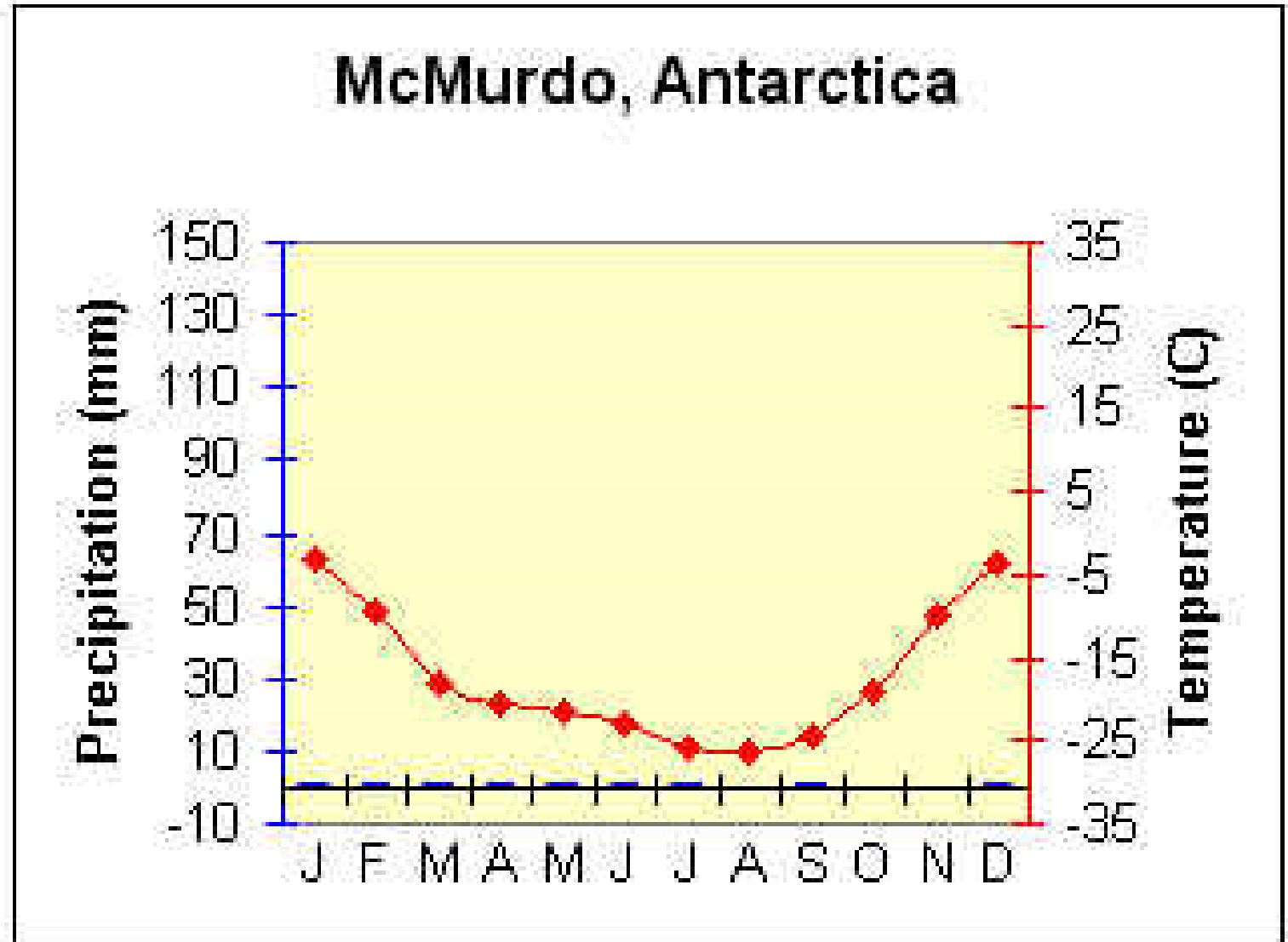


## Key

- March (end of summer)
- September (end of winter)

# Climate of Antarctica

What does the Climate graph show about Antarctica's temperature?



Threats to

Antarctica

# Climate change



Sea and land ice is melting due to increasing temperatures. Already some ice shelves have collapsed and ice slopes and glaciers have retreated. The ocean is becoming acidic due to carbon dioxide. Marine snails are dying due to the higher temperatures. The breeding populations and ranges of some penguin species have been altered.

The background of the slide is split into two main visual areas. On the left, there is a close-up photograph of a large, dark-colored fish, possibly a cod, with its mouth open, resting on a rocky surface. On the right, there is a photograph of a single krill, a small crustacean, shown in profile against a solid black background. The krill has a translucent body with blue and red markings on its legs and antennae.

## Fishing legal/illegal

Much of the world's oceans are over-fished, the chances are that if investments into the kinds of boats and fishing gear needed for Antarctica are made, then it too will suffer this same fate.

Fishing for krill could be particularly significant as these are at the bottom of many Antarctic food chains. There are already illegal fishing boats.

# Oil and gas exploitation

Although oil and gas exploitation does not currently happen as a lot of Antarctica is protected. It is becoming an increasing threat as technology is improving.

The Antarctic Treaty bans all mining and mineral exploitation for the future, however this comes up for review in 2048 (in other words, it isn't really banned in the future at all).

If oil and gas exploitation begins there will be air pollution and potential oil spills.



# Pollution



A huge hole in the ozone has appeared over the past 30 years. Chemicals produced thousands of miles away are found in Antarctic ice and in the bodies of wildlife.

Waste, equipment, chemicals and oil can degrade the landscape. Fishing nets, plastic, lines, hooks etc. carried by the sea can result in great suffering or loss of life by birds, fish and marine mammals.

# Tourism



Although no-one lives permanently in Antarctica. Tourism is becoming very popular. When tourists visit the Antarctica they use ships and aircrafts to get there. These transport methods produce pollution.

Ships can also cause oil spills which damage the environment and kill the wildlife.

If tourism increases it will cause more damage on the environment.

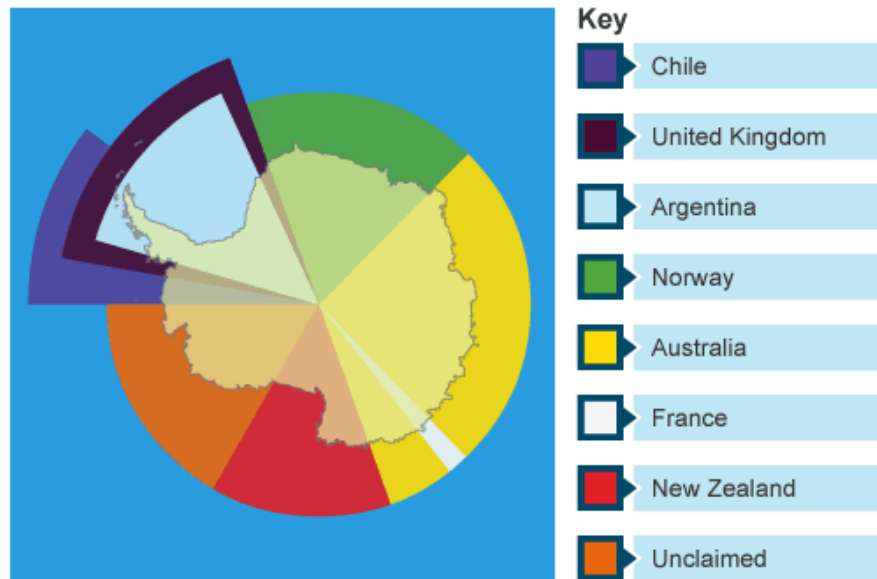
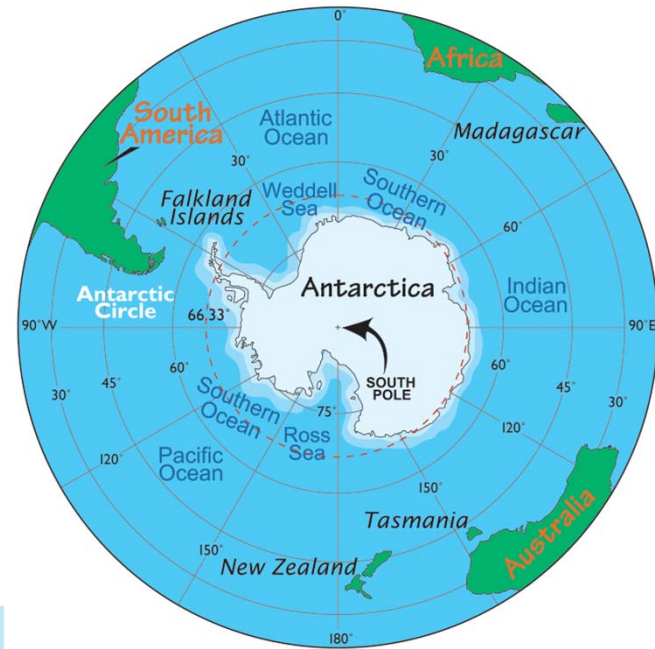


How can we

protect

Antarctica?

In 1961 The **Antarctic Treaty** was signed to help control human activity in the location.

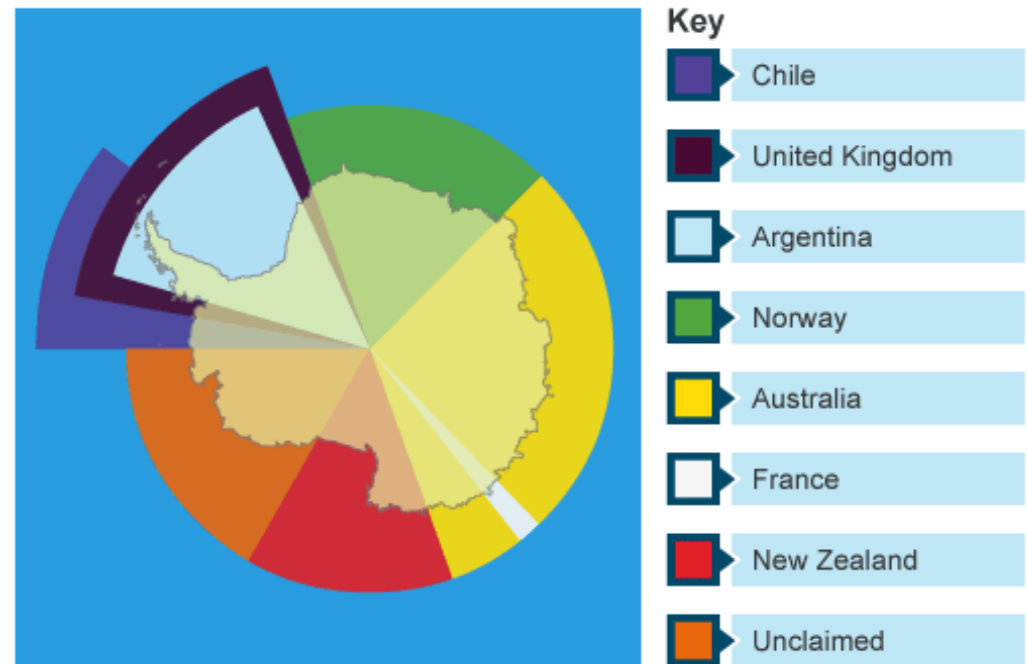


Who should be in control of the area?

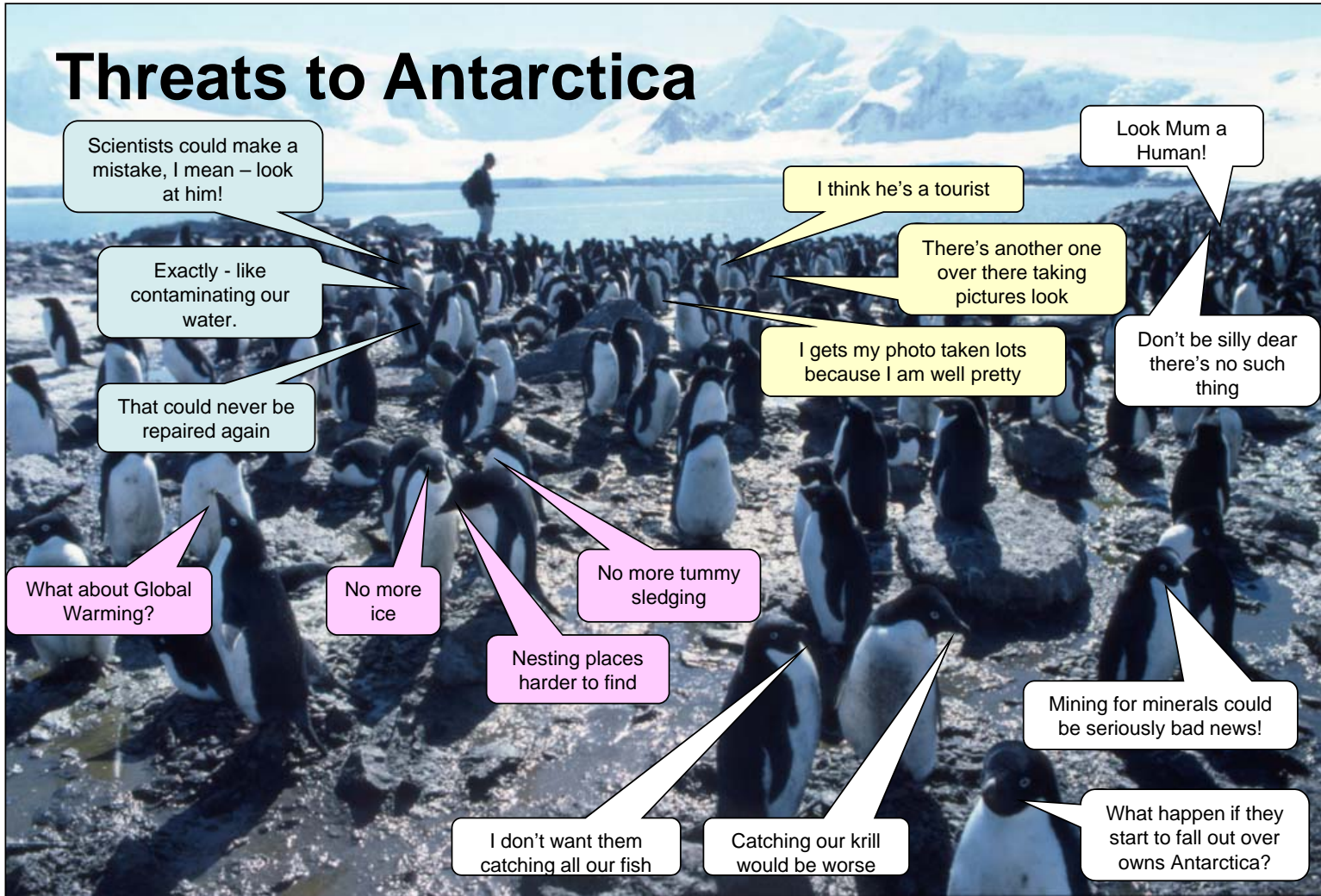
Why is this treaty important?

# The rules

- Countries who have signed up to the treaty are free to carry out scientific experiments and must share their results.
- The environment must be conserved.
- There must be no dumping of nuclear or radioactive waste.
- The land is to be used for peaceful purposes only – no military activity is allowed.
- Any new activities must be properly assessed for their environmental impact. Any impact must be minimised.

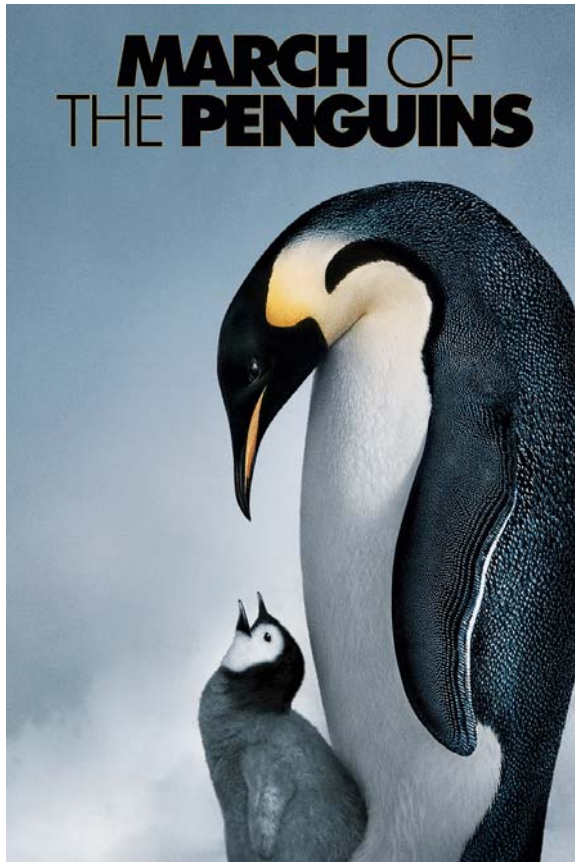


# Threats to Antarctica



- Watch the 'March of the Penguins' movie trailer.

Why do you think this film was made?

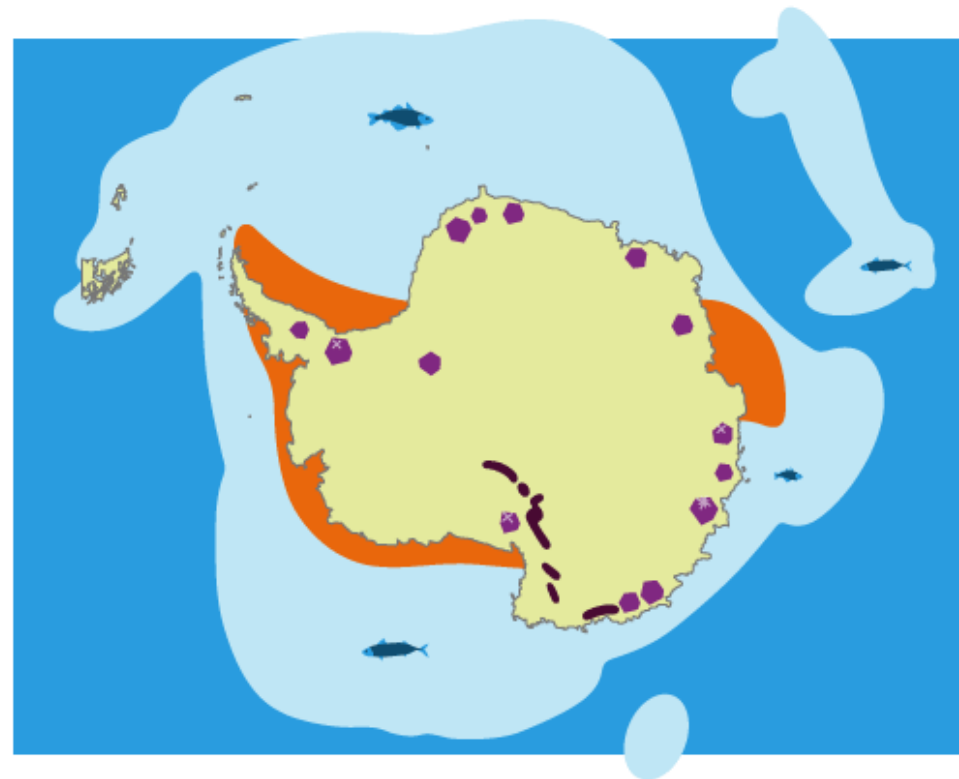


<https://www.youtube.com/watch?v=L7tWNwhSocE>

<https://youtu.be/MlBxRBfGAR0>

# The Antarctic Treaty

The treaty is finished in 2048 and will need to be reviewed.



Key

 Sea life resources	 Potential oil and gas resources
 Mineral resources	 Coal resources