



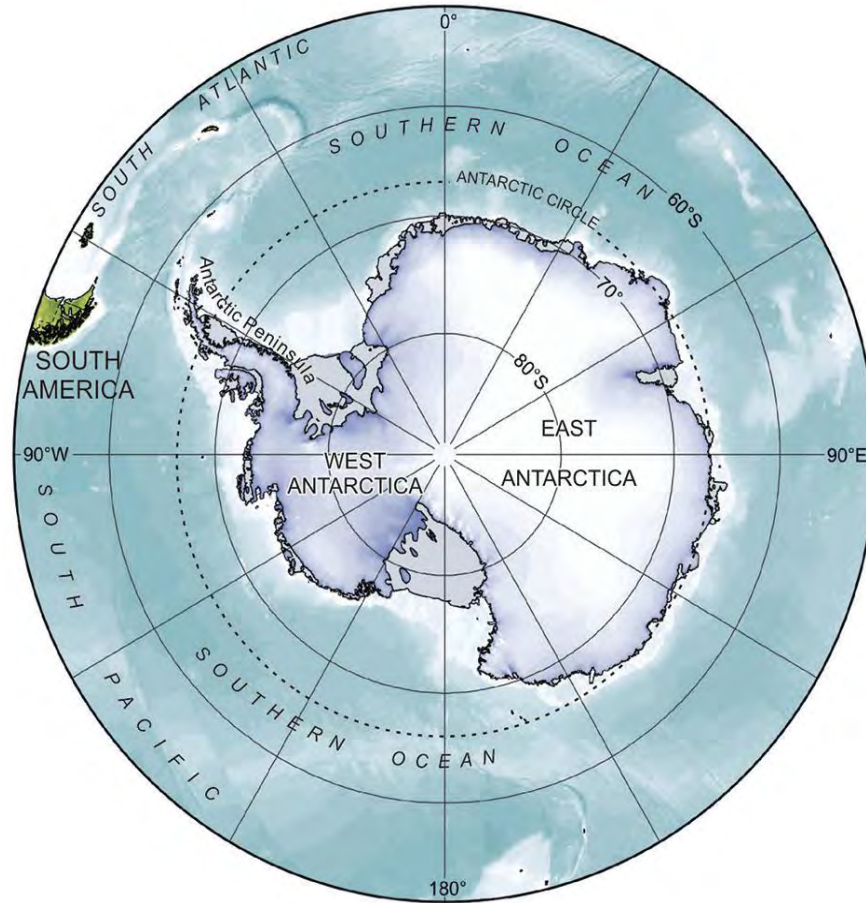
UK Polar Earth Observations: *observational needs for policy*

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ECSAT
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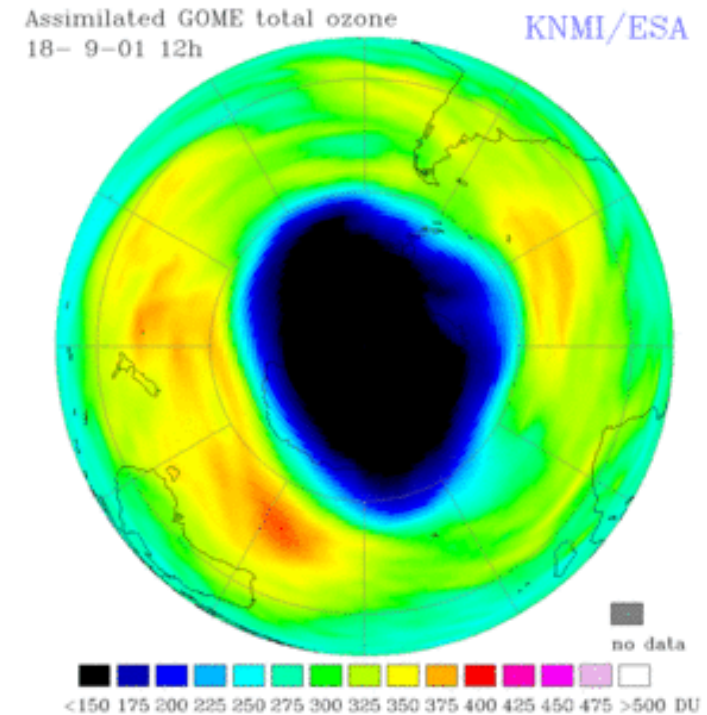
Overview

- Provide a short summary of UK policy in the Arctic and Antarctic
- Identify the major policy drivers for observational needs
- Offer examples of what may be potential future observational needs with policy focus



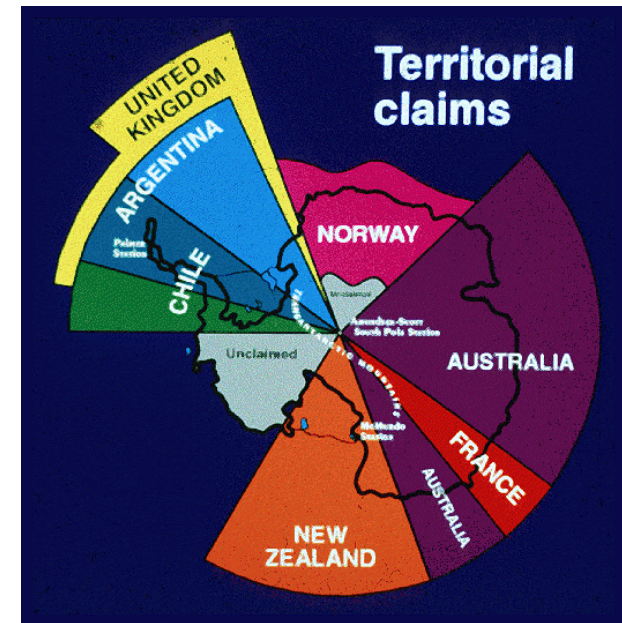
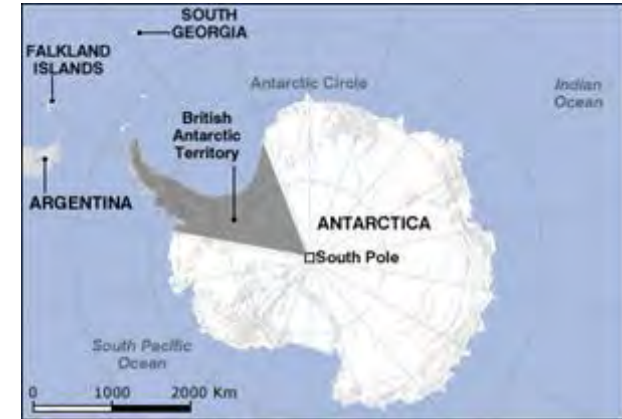
1) Antarctica – policy engagement

- Territorial and sovereign interests
- International Treaties and associated agreements
- Other international commitments
- Future possible commercial pressures – tourism and mineral extraction...



Antarctica – sovereign interests

- British Antarctic Territory: UK's largest Overseas Territory. Also South Georgia & the South Sandwich Islands.
- Legal entity since 1908 – oldest claim to a part of Antarctica
- Consistent year-round UK presence since 1944.
- Modern and practical governance – suites of legislation; judicial system; postal and tax administration.
- In full compliance with Article IV of the Antarctic Treaty.



Antarctica – international Treaties

- Original signatory to the Antarctic Treaty 1959. Now 53 members. Antarctica preserved for peaceful, cooperative scientific and other appropriate use.
- Environmental Protocol in force by 1998: impact assessments, protected areas, guidelines on use, commercial mining prohibited.
- UK active and committed Treaty member – investing heavily in science, safety and operational systems, and in discussions on future best management/use.



Antarctica – international Treaties: Marine Protected Areas

- Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) – October 2016 – hard-won agreement to new MPA in the Ross Sea.
- Also agreement to prohibition on fishing in areas after ice shelf collapse in the Antarctic Peninsula – 10 year protection only begins when there has been 10 per cent reduction or collapse – can sensing help?
- Existing MPA in the South Orkney Islands, Antarctic Peninsula. And also important MPA in South Georgia – remote sensing important – can it distinguish between iceberg and fishing vessel?
- Monitoring and active management essential to effective implementation of current protection and successful future expansion, as per UK policy.

Marine protected area declared in Antarctica



Source: New Zealand Ministry of Foreign Affairs and Trade, Antarctic Ocean Alliance, The Pew Charitable Trusts



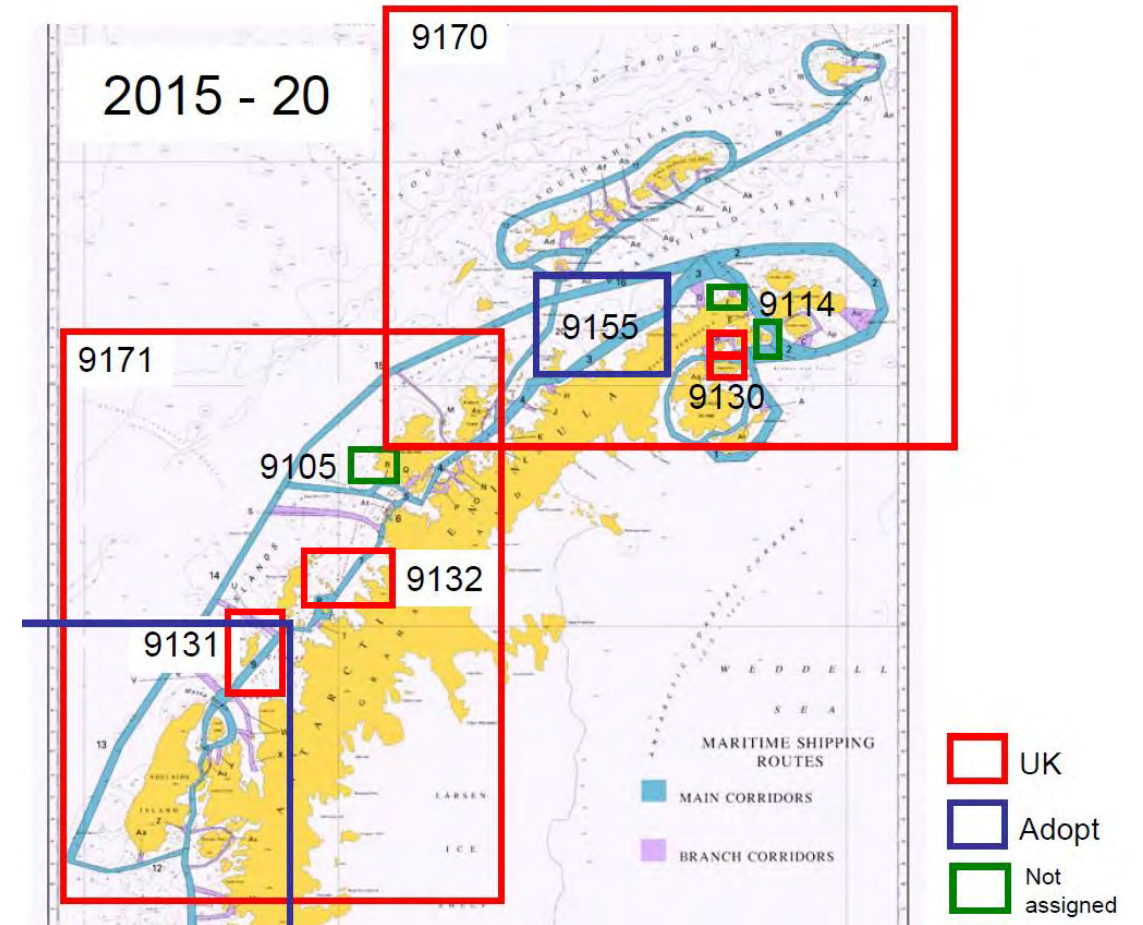
Antarctica – international Treaties: environmental liability

- Annex VI of the Environmental Protocol: introduces legal and financial liability for environmental clean-up action taken by others, in the event of failure to act by the responsible party.
- Not yet in force, but the UK and others have signed, in expectation of final ratification.
- Monitoring and earth observation could have a role to play in assessing extent and impact



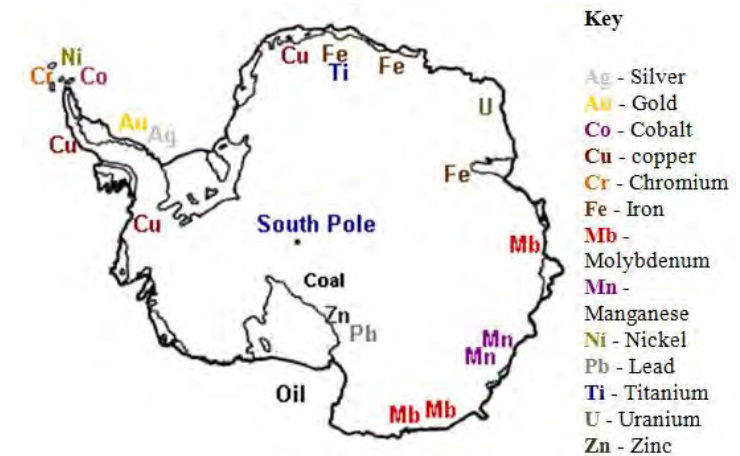
Antarctica – other agreements: charting responsibilities

- Significant numbers of tourist vessels – cruise ships and yachts; fishing boats; research vessels and logistical support vessels
- UK Hydrographic Office has international commitments through the International Hydrographic Office to produce charts for large portions of the Antarctic Peninsula.
- The UK is delivering on its commitments – new charts produced in 2015 and 2016, but this is a major task.



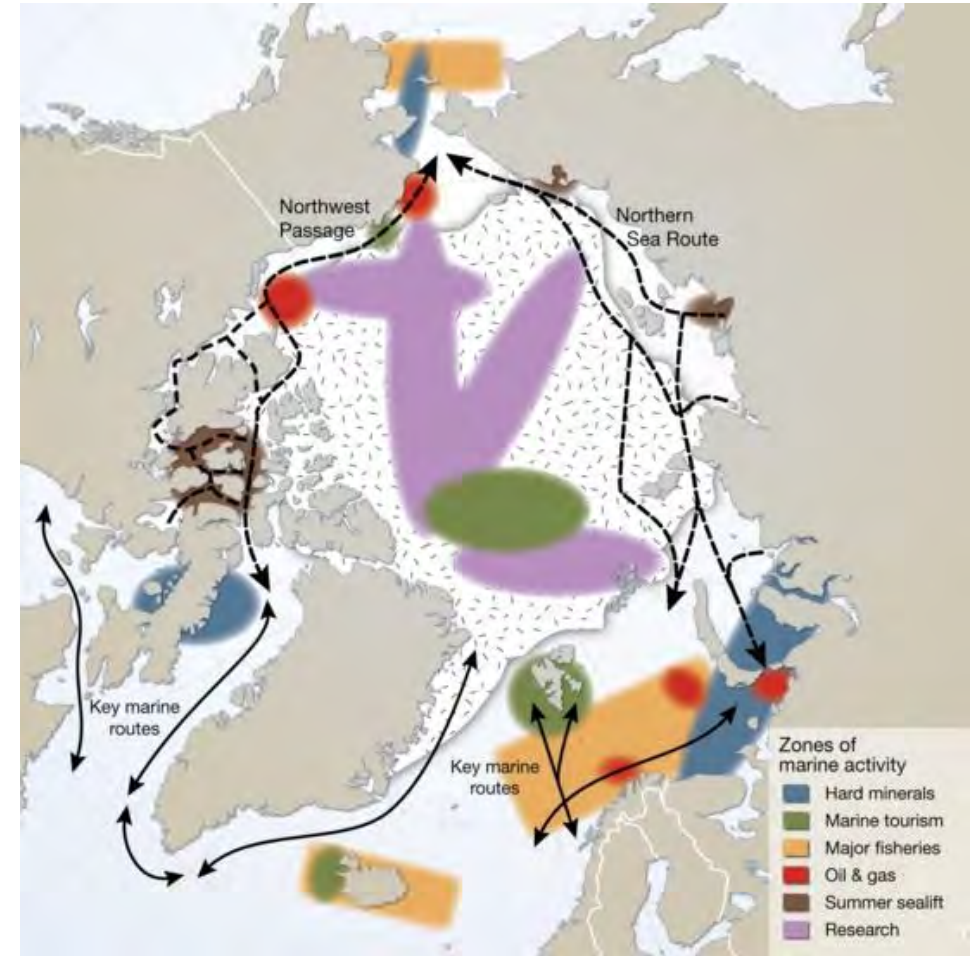
Antarctica – commercial pressure: tourism and resources

- Tourism - a long-established and accepted activity – when appropriately managed. The pressure is upwards with around 40,000 visitors in 2015-16, virtually all from cruise ships. Management measures already in place and further discussion to come.
- Resources – commercial mining is prohibited under the Environmental Protocol. But continuing need to be alert to potential threats and mixing of the boundary between scientific and commercial extraction.



The Arctic: policy engagement

- National priorities, but no territorial or sovereign interests
- The Arctic Council
- Examples of other international commitments
- Earth observation in the Arctic is rapidly gaining political legs...



The Arctic: national priorities

'The United Kingdom will continue to support and respect: the sovereign rights of the Arctic States to exercise jurisdiction over their territory; the people who live and work in the Arctic; and the unique and fragile natural environment. It outlines the United Kingdom's legitimate interests in the region; our priorities for practical action and willingness to show leadership in appropriate areas.'

Mark Simmonds MP, Minister for the Polar Regions (2013)

Human dimension

- *Work towards an Arctic that is safe and secure; well governed in conjunction with indigenous peoples and in line with international law*

Environmental dimension

- *Promote an Arctic where policies are developed on the basis of sound science with full regard to the environment*

Commercial dimension

- *Promote an Arctic where only responsible development takes place*



The Arctic: The Arctic Council

- 8 Arctic States. 6 Permanent Participants. 12 Observers – including the UK.
- Capable of creating binding commitments on the 8 Arctic States (SAR, oil spill preparedness and scientific cooperation (tbc)).
- Working Groups, Expert Groups, Taskforces.
- UK is engaged and committed in appropriate Working Groups.
- Earth observation is central to much of the Working Groups' work. With International Arctic Science Committee, Arctic Council established Sustaining Arctic Observing Networks (SAON).



ARCTIC COUNCIL



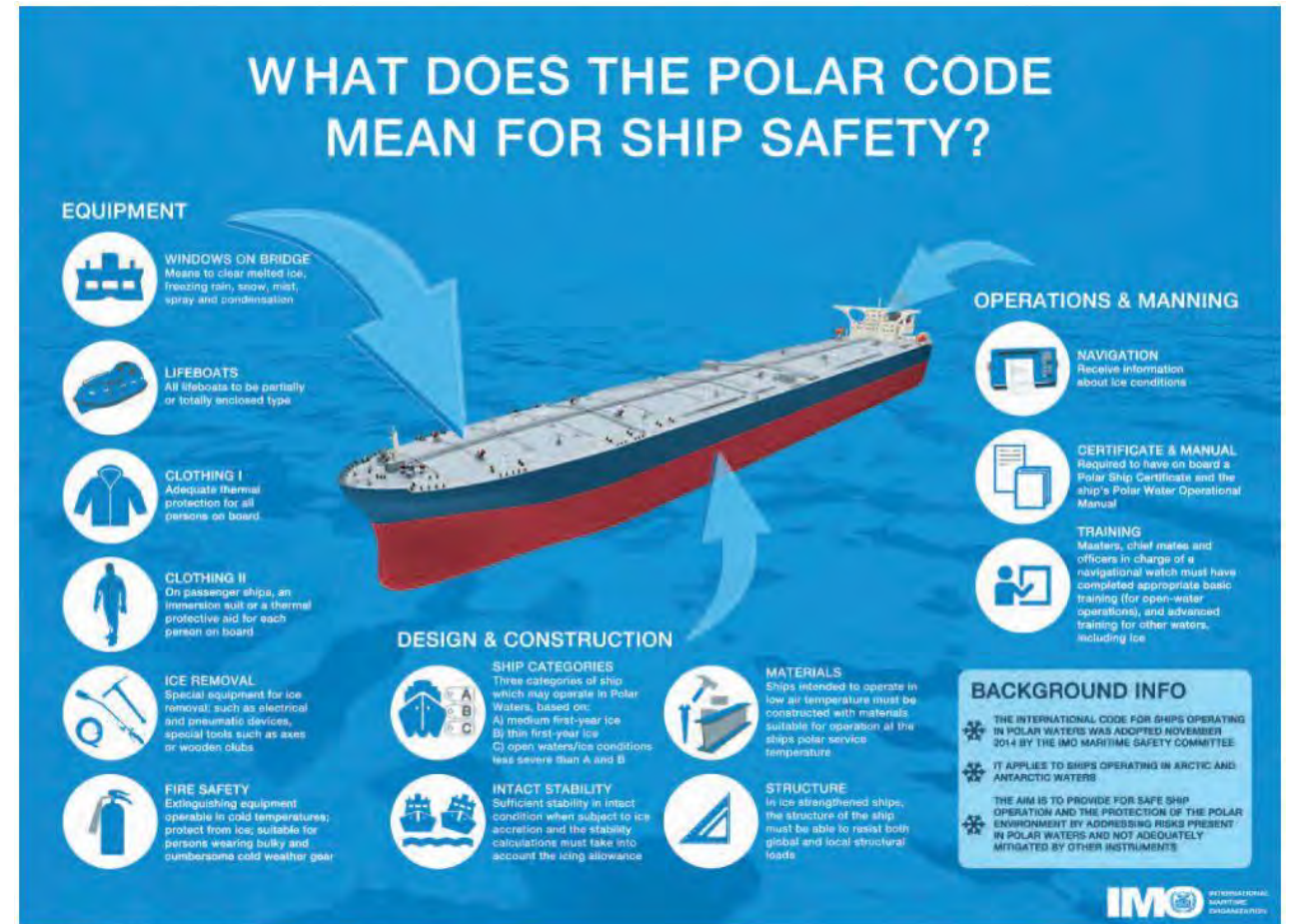
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The Arctic (and the Antarctic): 'Polar Shipping Code'

- International Maritime Organization. Comes into operation 1 January 2017.
- 23 years in the making. Ship safety and environmental protection, with new rules affecting the majority of tourism and cargo vessels in polar regions.
- Vessels will require Polar Ship Certificate and Polar Waters Operational Manual.
- Implications for observations...



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The Arctic: White House Arctic Science Ministerial

- 28 September 2016 – 24 countries, plus senior representation from the European Commission.
- Focusing on step-change in Arctic science, especially international collaboration in improving sustained Arctic observation.
- Joint Statement from Ministers.
- European Commission committed to host next meeting in 2018. Regular updates before.



Conclusions

- *We have a broad range of sovereign, legal, environmental, commercial and international cooperation reasons for our active and close engagement in the polar regions.*
- *The policy rationale is different in some areas between the Arctic and Antarctic – but is equally strong.*
- *There are direct links to the possibilities provided by future polar earth observation.*

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