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INSTITUTE FOR MARINE AND ANTARCTIC STUDIES

The Future of the Antarctic Treaty System

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10 – The future of the ATS

The concluding seminar will summarise the Antarctic Treaty System and look towards the future. One of the main considerations for the future will be climate change, and this session will also examine what the science is indicating and what kinds of challenges the Treaty Parties may face in the future. The Antarctic Treaty System is seen as a remarkable example of international cooperation, providing the basis for the establishment of a sophisticated system of management for uses of Antarctica and the Southern Ocean. This seminar acknowledges the achievements of the ATS, its critics and their criticisms, and looks at matters that may affect the region in the future.

Antarctic Treaty System (ATS)

1959 ANTARCTIC TREATY

Original 12 Signatories (*all Consultative Parties*)
36 other Contracting Parties (*16 Consultative Parties*)

Treaty Meeting Recommendations,
Measures, Decisions, Resolutions

1972
Convention for the Conservation of
Antarctic Seals

1980
Convention on the Conservation of
Antarctic Marine Living Resources

1991
Protocol on Environmental Protection

1988
Convention on the
Regulation
of Antarctic Mineral
Resource Activities

How good is the Treaty?

Original Goals Achievements

- Peace No wars; anyway no military activity allowed
- Science Lots, duplication, ? quality results (“there are no woodpeckers in Antarctica”), science has priority
- Cooperation Yes, especially about easy things; consensus drives agenda but protects the rights of all parties
- Exchange info ? Sometimes (web-based)
- Exchange personnel Yes
- Exchange results Yes (we presume...)
- Cooperation with specialised agencies IMO, WMO, etc
- Nuclear ban No testing or waste disposal
- Sovereign claims elegance of Art.IV overrides and neutralises any individual action by claimants; nobody likely to challenge this for now
- High seas rights **X Complex (eg. Japan and whaling, CCAMLR and freedom to fish)**

How good is the Treaty?

Original Goals

Achievements

- Observation / inspection No major disputes, but no major changes in behaviour either
- Jurisdiction Flag-state for ships/aircraft; national over people
- Flexibility through ATCMs Development of ATS
- Consultative Parties From original 12 to 28 in 50 years
- Application to 3rd parties Yes; only exceptions were Pakistan (late 1980s), Greenpeace (early 1990s), Malaysia
- Dispute resolution mechanism No major disputes (not public ones)
- Modification / amendment CCAS, CCAMLR, CRAMRA, MP
- Consensus Means either 'yes' or no formal objection (not the same thing); protects/respects all positions
- Accession From original 12 to 48 in 50 years (largest populations - India and China, power brokers - USA, UK, Fr)

How good is CCAS?

Original Goals

Achievements

- Seals conservation **Fur seals so numerous they are now de-listed from Protocol special protection status**
- Regulate harvesting **Through governments, but no harvesting**
- Application **Applies to all seal species**
- Flexibility **Can be amended but hasn't**
- Application to 3rd parties **No provisions; not tested**
- Dispute resolution mechanism **No provisions**

- No commercial sealing; a few seals 'taken' each year for scientific research.
- Many now argue that CCAS is irrelevant since the Protocol gives blanket protection to all species.
 - Why don't the ATCPs get rid of the Convention, citing a fundamental change of circumstances?

	Antarctic Seals Captured	Antarctic Seals Killed
Argentina	34	Nil
Australia	Nil	Nil
Belgium	Nil	Nil
Brazil	103	Nil
Canada	Nil	Nil
Chile	Nil	Nil
France	150	Nil
Germany	Nil	Nil
Italy	Nil	Nil
Japan	Nil	Nil
Norway	Nil	Nil
Poland	Nil	Nil
Russia	Nil	Nil
South Africa	Nil	Nil
United Kingdom	Nil	Nil
United States of America	1210	1

All reported capturing was for scientific research (from UK IP3 to ATCM XXXIV, 2011).

How good is CCAMLR?

Original Goals

Achievements

- Conservation rational use; ecosystem approach
- Regulate harvesting but still some non-compliance issues/IUU
- Application ? applies to all species except whales, seals and microorganisms (doesn't deal with bioprospecting, which is considered scientific research, or if re-sampling/harvesting occurs, then it would be fishing!)
- Flexibility Is amended annually through conservation measures
- Application to 3rd parties But little success
- Dispute resolution mechanism Available, not used
- Observation / inspection No major disputes
- Consensus No formal objection
- Sovereign claims Repeats Art.IV plus Chairman's Statement
- High seas rights X complex, overridden by RFMO status

Patagonian toothfish, *Dissostichus eleginoides*
hard hit by IUU and now protected through range of
Conservation Measures including:

quotas

Catch Document Scheme chain of custody provisions
Vessel Monitoring System – the boats that are licensed
‘ping’ their position to their flag state and CCAMLR
simultaneously; others in the area are thus known to
be IUU vessels



How good is the Protocol?

Original Goals

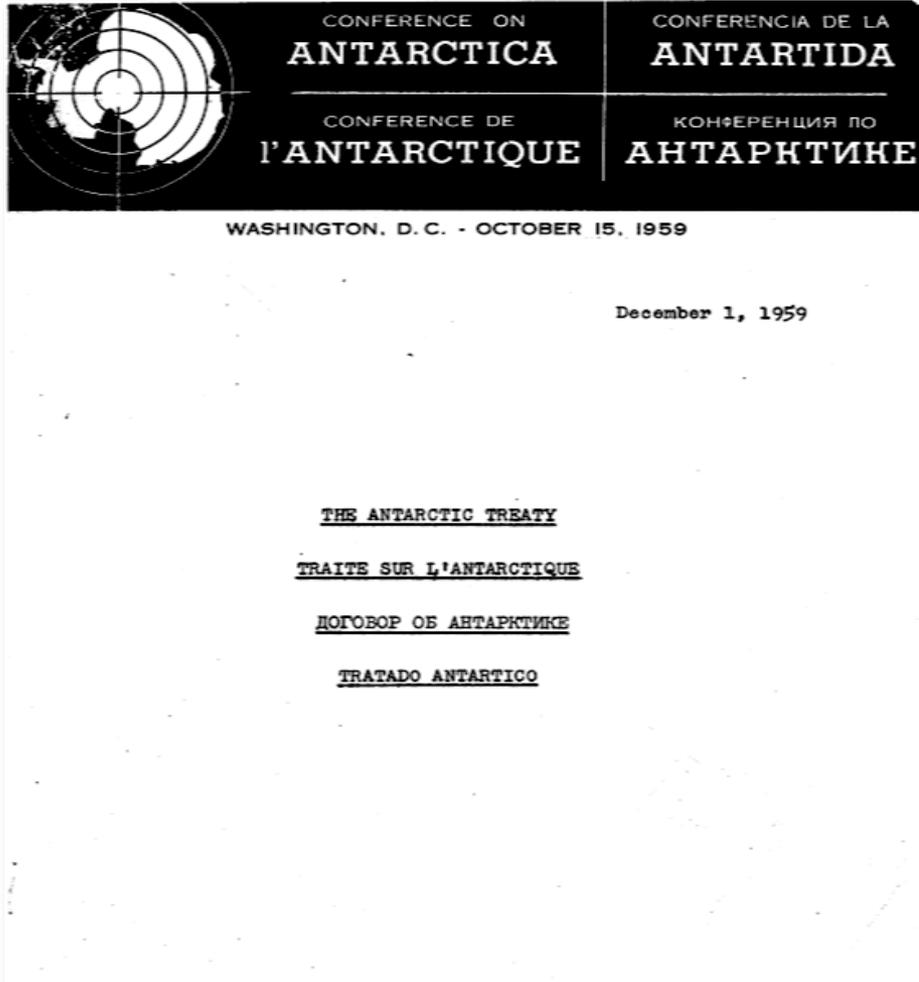
Achievements

- Comprehensive protection but dependent/associated ecosystems not defined, not tested
- Peace and science no disputes; behind the scenes negotiations generally forestall problems; agreement not to discuss contentious issues such as sovereign claims, whaling
- Mining ban “Prospecting” is science but exploration and exploitation are banned
- Application applies to all authorised human activity
- Flexibility Annexes can be amended
- Application to 3rd parties but not tested
- Dispute resolution mechanism not used
- Observation / inspection but does not influence behaviour
- Sovereign claims repetition of Art.IV
- High seas rights **X complex; not tested**
- Autonomy of CEP **X advisory only**

...and its Annexes?

- Annex I Better than nothing; applies to all authorised human activity; but EIA state responsibility, no useful guidelines, no formal veto allowed
- Annex II Conserves fauna and flora but weak because no direction for how to avoid introduction of aliens, for example; defers to International Convention for Regulation of Whaling, so whales not covered
- Annex III Relatively good, considering location of activities; rubbish or heritage? Inspections available but reports don't change bad behaviour
- Annex IV Better now collaborating with International Maritime Organization on mandatory polar shipping code
- Annex V Strong system of area management/permit system
- Annex VI Useless; even 'polluter pays' principle watered down

The next 50 years...

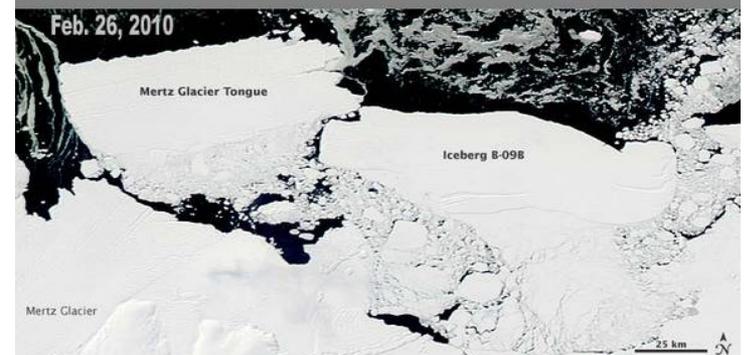
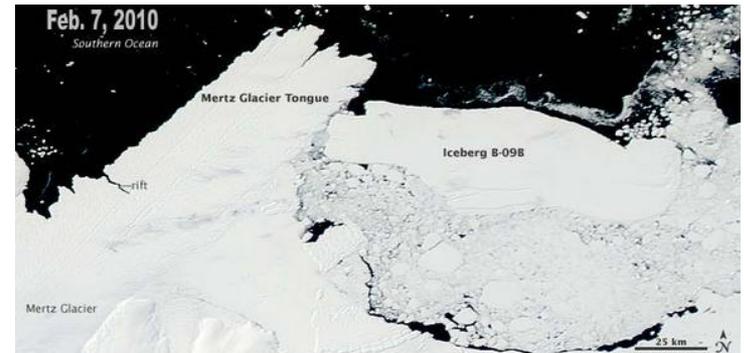
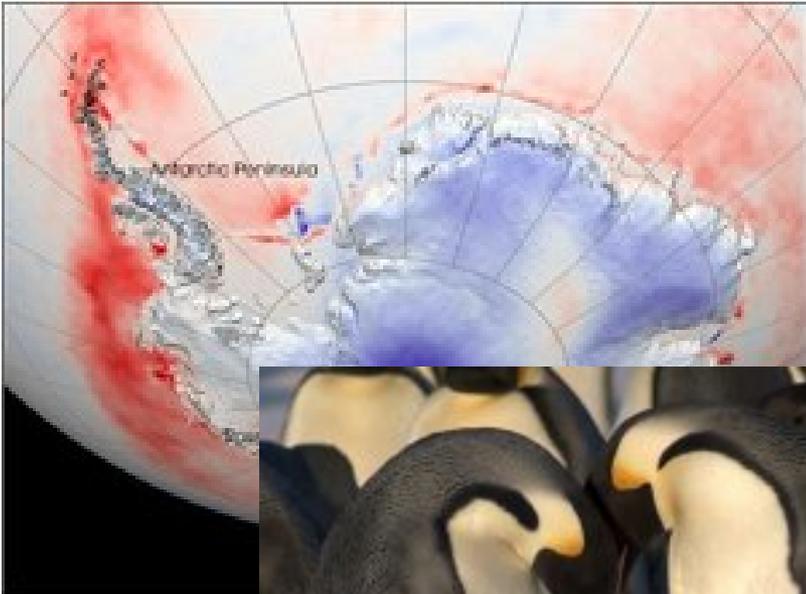


Challenges based on:

- Changing physical conditions
- Tourism growth
- National agendas and sovereignty
- Relevance of science
- Mineral resources
- Law of the Sea and other regime overlaps
- Non-traditional uses

Changing physical conditions

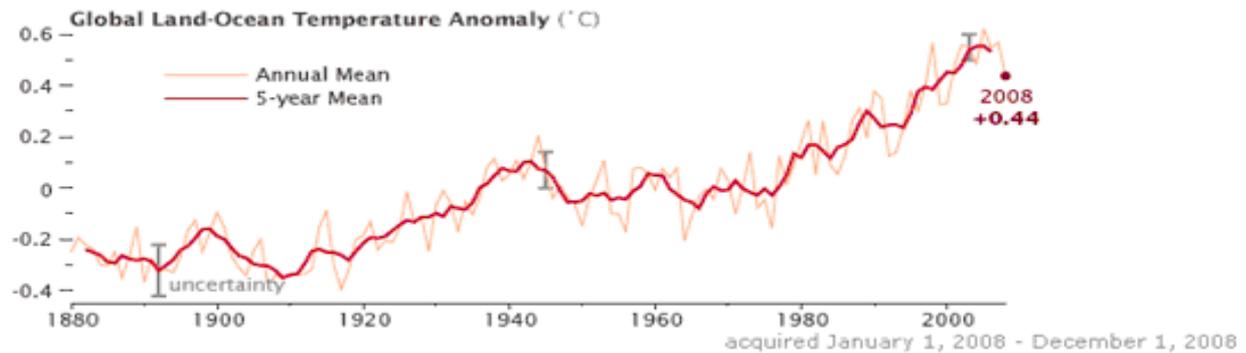
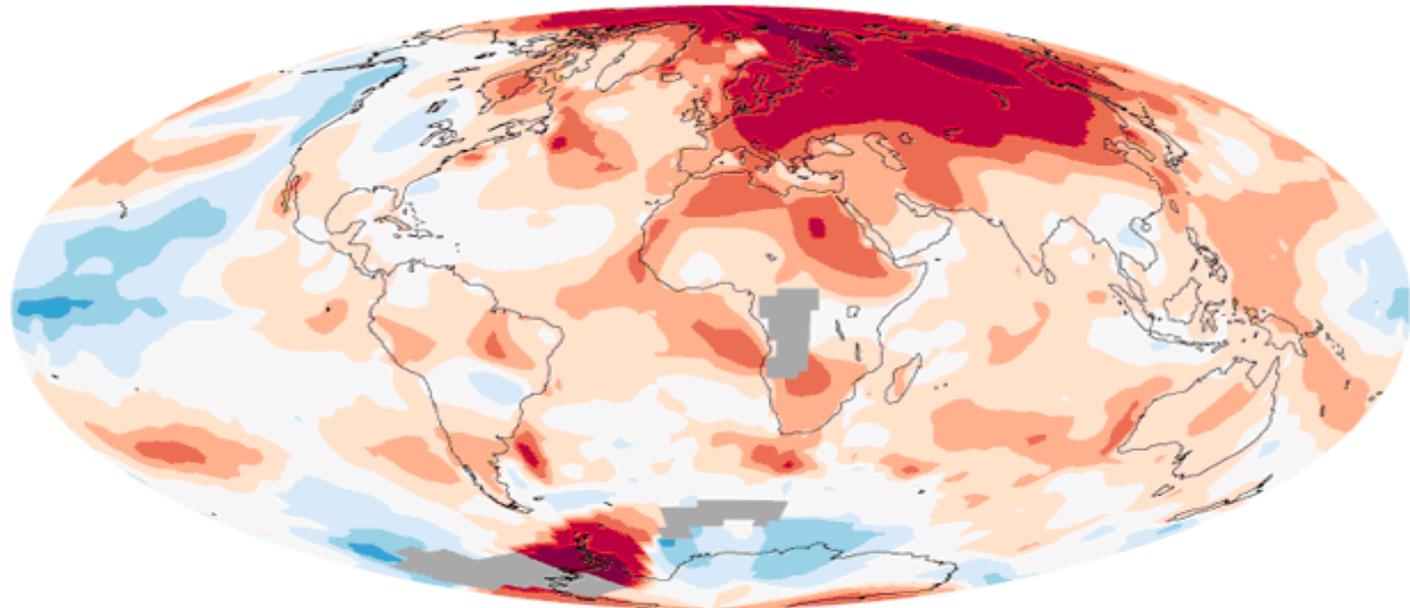
- warming
- ice regime changes
- species shifts
- strengthening westerly winds
- ocean acidification



can only get worse...

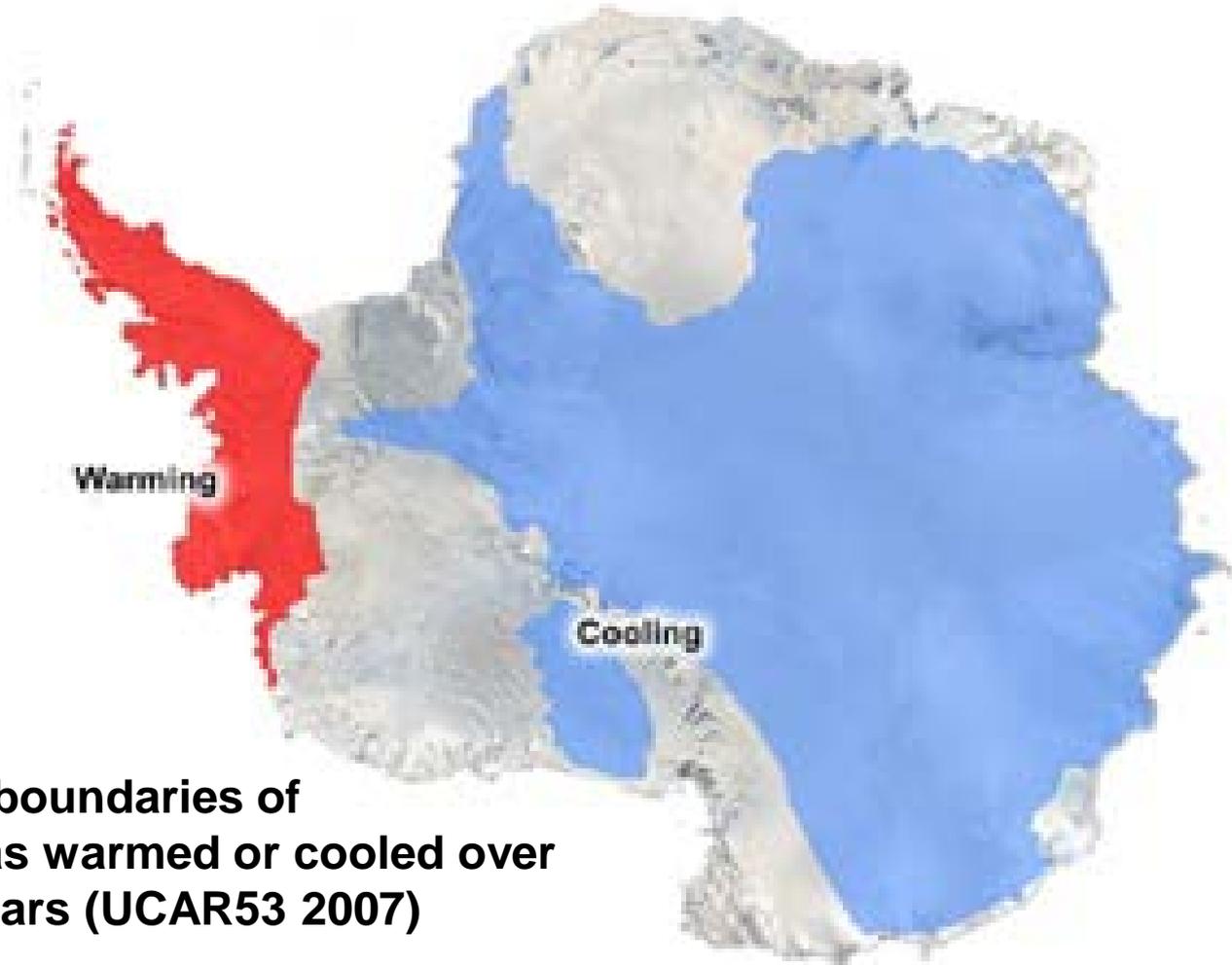
2008 Global Temperature

Posted January 21, 2009



if these trends continue...

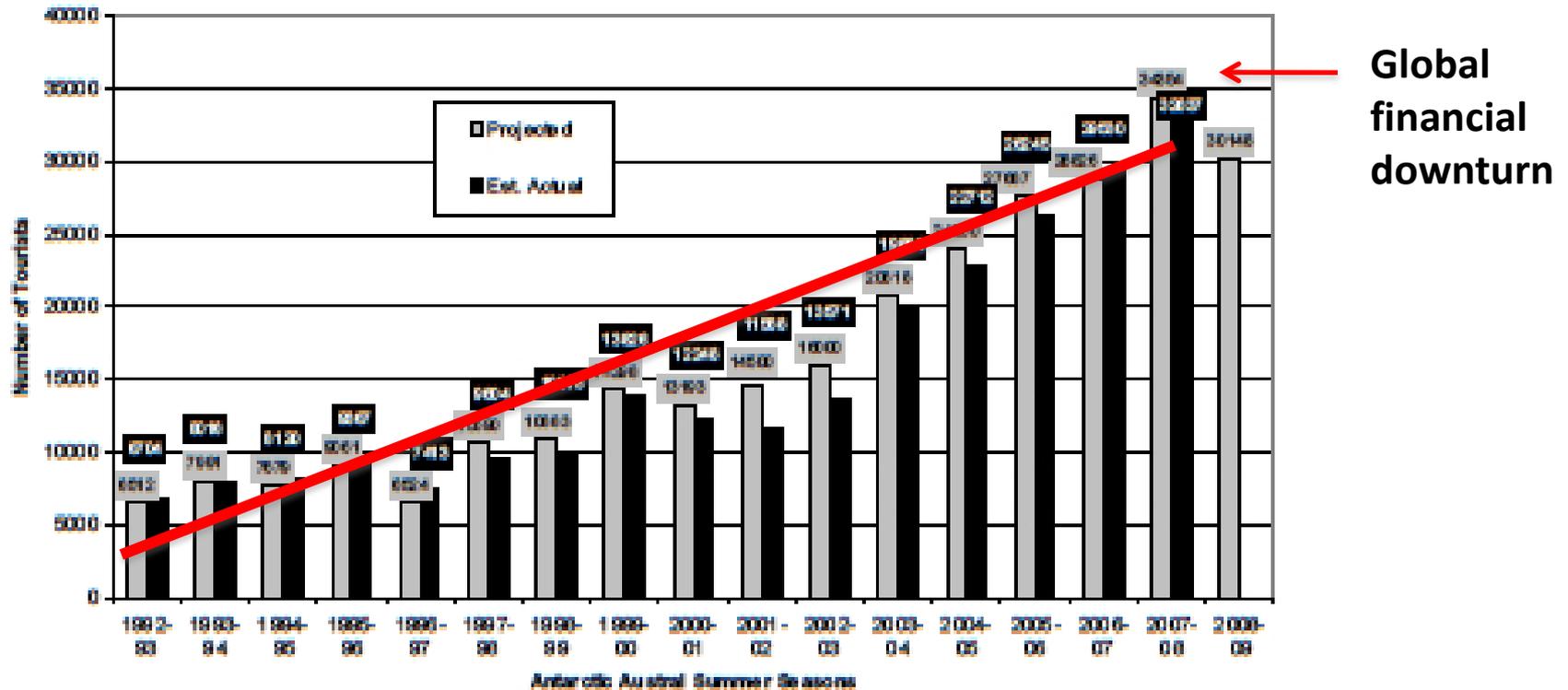
Antarctic Temperature Trends



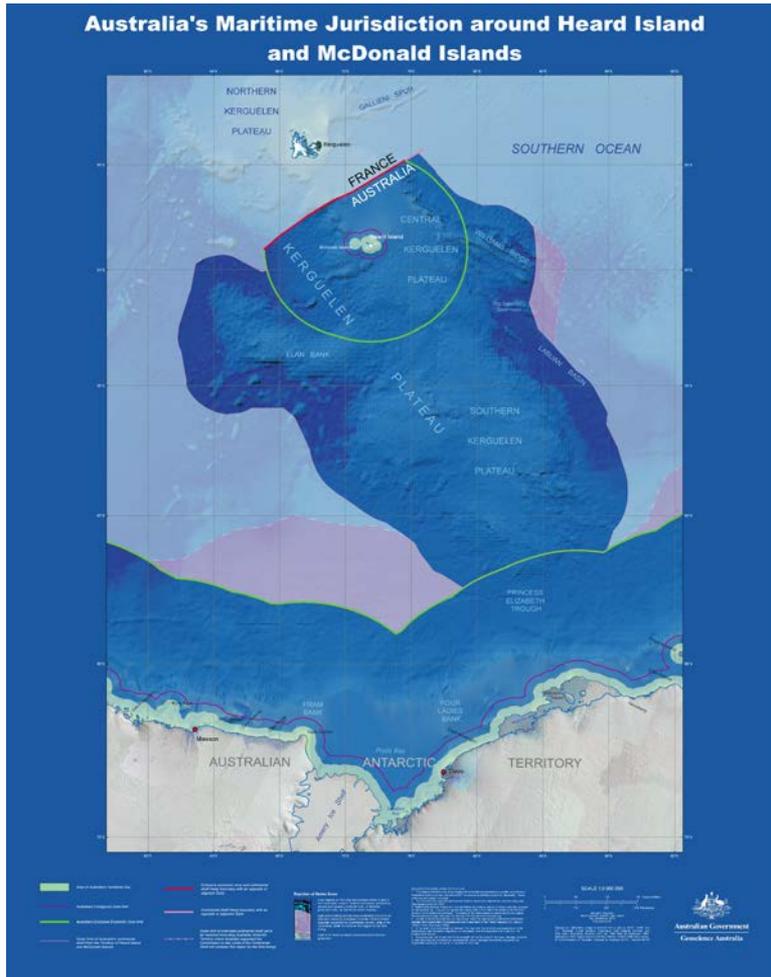
Approximate boundaries of
Antarctic areas warmed or cooled over
the past 35 years (UCAR53 2007)

Tourism growth

1992-2008 ANTARCTIC TOURIST TRENDS - Landed (includes Ship and Land-based passenger numbers. 1997-98 onwards includes some commercial yacht activity)
May 20, 2008



National agendas and sovereignty



- Australia's Heard Island extended continental shelf zone extends south of 60°; confirmed by CLCS
- Would Australia exploit the seabed resources there?
- No AT Consultative Party would deliberately jeopardise the stability of the system...

Relevance of science

	Top 10 Consultative Parties (output)	Scientific Output 1980-2004	\$ R&D Expenditure (gross per capita)
1	USA	2,887	954
2	UK	1,492	491
3	Australia	1,052	405
4	Germany	949	686
5	Italy	653	289
6	France	526	611
7	Japan	492	837
8	New Zealand	430	246
9	Russia	306	102
10	Spain	241	222

Scientific Output 1980-2004 – from Riddle Presentation to 75th Anniversary Symposium, after Dastidar and Ramachandran 2008

Census of Antarctic Marine Life 2005-2010

- One of the leading Antarctic projects of the IPY 2007/2008
- 19 research voyages
- over 300 biologists from 30 countries
- continuing collaboration through SCAR
- for the first time, species in the Antarctic were compared with the Arctic

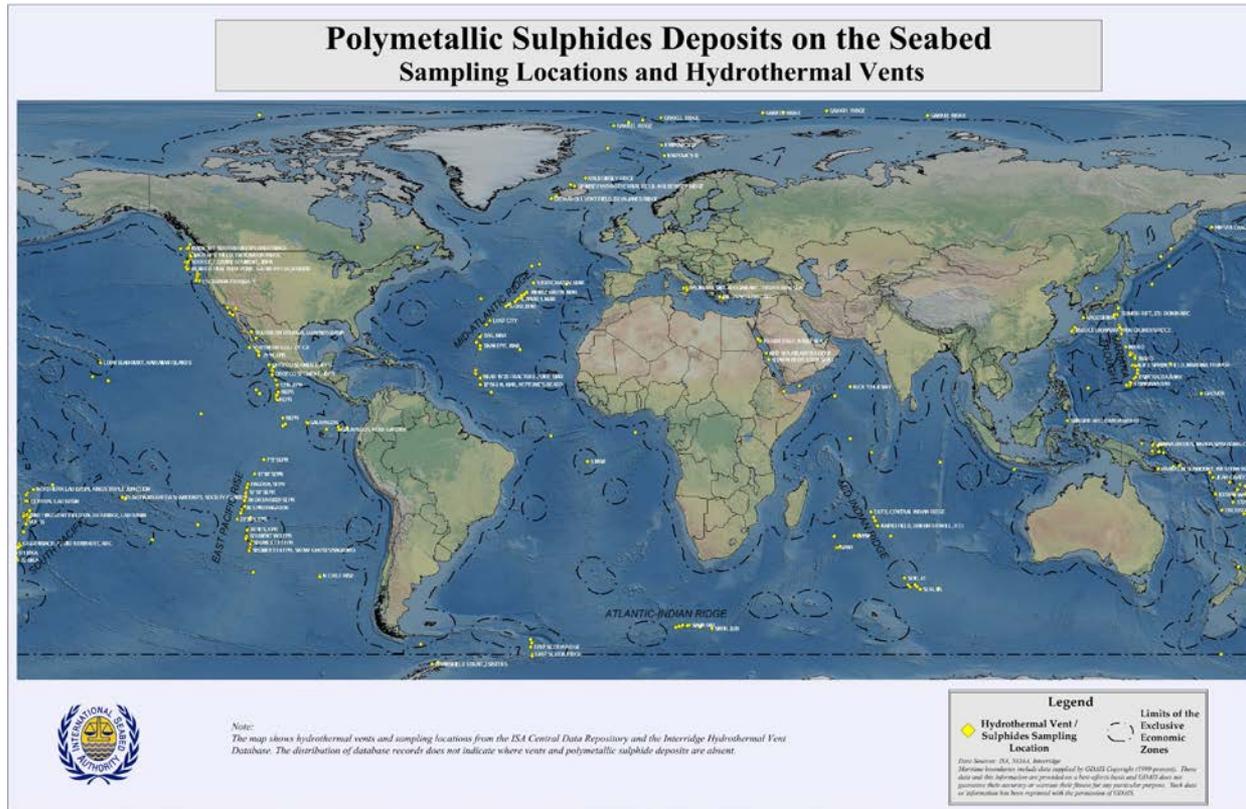
**Never before seen
underwater world...**



Mineral resources

- Under CRAMRA, Sponsoring States were required for all mineral activities
- They would have regulated but not had exclusive jurisdiction over resources
- CRAMRA was rejected in favour of the environmental view
- Article 7, Madrid Protocol, prohibits mineral resource activities but permits scientific research - “prospecting”?
- Ban can be lifted at any time by consensus (Art.25.1) and only applies to Treaty/Protocol States Parties anyway

LOSC and other regime overlaps



Antarctica hardly even on the ISA map of interest for seabed deposits! Resources of a last resort?

Whaling Convention

- Despite everything, Southern Ocean whaling is not an Antarctic issue!
- Japanese whaling under Art VIII of ICRW seems legal, if not ideologically acceptable
- Awaiting the outcome of Australia's ICJ case against Japan
- Unlikely IWC will make any major decisions in the meantime



Biodiversity Convention

Obligations generic and of less value overall than current Antarctic Treaty System means of biodiversity protection



Climate change will have biggest impact so essential to integrate sciences and adopt scientific information into decision-making

Non-traditional uses

Ocean fertilisation

- Trials in high nutrient low chlorophyll areas of open ocean to test additional uptake of CO₂
- Theory is that adding fertiliser (eg. iron) will stimulate phytoplankton growth
 - Photosynthesis uses CO₂ therefore extra productivity will use extra CO₂ from the atmosphere as the air/sea interface is usually in balance
- Purpose is two-fold: increased CO₂ drawdown used to offset carbon and increased productivity might increase fish stocks
- Not proven; environmental effects poorly understood

Non-traditional uses

Fresh water harvesting

- Some optimism that technology will be developed for in-situ 'harvesting' of fresh water from ice or towing icebergs
- Ice is not a mineral under ATS (though geologically speaking it is) therefore 'harvesting' is not mining
- Jurisdiction over ice is problematic
- Environmental effects not understood, eg.
 - scouring of seabed
 - loss of critical habitat
 - changes in bottom water production

Exploding the myths...

- The Treaty does not expire and has never itself been modified
- Claims to sovereignty are not “frozen” but rather (arguably) are acknowledged and protected by Article IV; *discussion* about claims has been frozen, however
- Any State that is in the UN can accede to the Treaty
- Consultative Party status is earned through scientific research, but doesn't mean a ship/expedition/station
- Mining is banned, not just subject to a moratorium, and the ban can be lifted at any time by consensus; but only applies to States Parties
- The unclaimed sector will remain unclaimed while the Treaty is in force, no matter who plants a flag there!

Summary: ATS criticisms

Everything is criticised by someone!

Some commonly recurring themes are:

- Acknowledgement and preservation of sovereign claims
- Lack of regulation of tourism
- Lack of liability for environmental damage
- Poor operation of the Madrid Protocol, eg.
 - EIA the responsibility of States Parties and no ATCM veto of activities therefore no true accountability
 - Inconsistency of approach to environmental matters

Summary: ATS defence

- Treaty is now 52 years old!
- Some form of regulation is better than none
- Some environmental leeway is practical in such a harsh environment where humans are aliens
- Consensus does not disenfranchise any party

Exam, 28 Oct, 1300 hrs, 70%

- Read the question! Only write the answer, not everything you know about something
- 10 short answer questions (each worth 2.5 marks = 25 marks in total)
- 3 problem-solving questions (each worth 25 marks = 75 marks in total)
- 180 minutes
 - = ~5 minutes for each short question
 - = ~30–45 minutes for each long question