



After The Thaw: Ice Retreat and Newly Exposed Marine Areas

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Introduction

- Novel approaches to retreating ice-shelves in Antarctica
- Review of recent developments under CCAMLR
- Management implications and challenges
- Future considerations for regulation of thawed areas



The problem

Collapse of Larsen B Ice Shelf, 2002



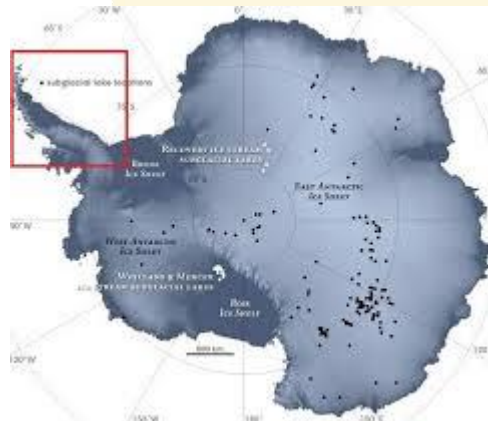
31 January

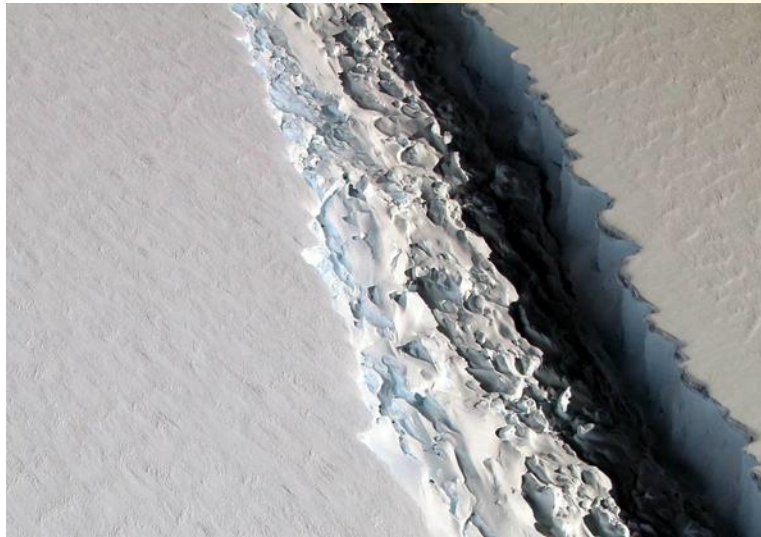


23 February



5 March





CRACKING UP

The Larsen ice shelf on the Antarctic Peninsula has transformed dramatically since the late 1990s. Its Larsen A section collapsed in 1995 and Larsen B followed in 2002. Now a large crack is spreading through Larsen C.

Bellingshausen Sea

Weddell Sea

The crack across Larsen C is now about 175 km long.

The shifting ice boundary



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Regulatory timeline

- 2009: CCAMLR Resolution 30/XXVIII
- 2010: ATME-CC considers implications of climate change; Recommendation 26 calls for “automatic interim protection” of newly exposed areas in its consideration of a suite of issues concerning protected areas
- 2011: Issue first raised at CCAMLR; primarily driven by UK with EU support.
- General support within CCAMLR, but concerns over vagueness and ultimate intentions for areas
- 2012: further discussions – moving away from MPA status towards Art IX.2(g) protection
- 2015: EU/UK proposal fails to gather sufficient support
- 2016: CM 24-04 adopted



CM 24-01

- Applicable only to Antarctic Peninsula; subareas 48.1, 48.5 & 88.3
- Protected area established after either the retreat or the collapse of an ice-shelf, glacier or ice-tongue
- Definitional issues problematic in formulation of policies
- Retreat: loss of more than 10% areal extent within any 10 year period from 2016 onwards
- Collapse: break up or disintegration over a shorter period of time than 10 years



Special Areas for Scientific Study

- CM 24-01 envisages 2 distinct phases of protection and activity
- Stage 1: operational for 2 years; a provisional designation to allow for data consideration and fisheries issues
- Stage 2: operational for 10 years
- Designation process intended to be swift
- Flexibility in notifications to respond to changing conditions
- Possibility of extending S2 status as a new proposal or a specific CM based on findings



Management conditions

- Pursuit of SASS status seemingly encouraged under CCAMLR
- Non-fisheries research requires submission of research plans and findings to Scientific Committee
- Restrictions on discharges and transshipment; system of vessel monitoring in SASS
- Fishing permitted, but strict catch limits (possible reflagging?): proliferating categories of research fishing
- Similar regime to research fishing and new/exploratory fishing under CCAMLR – prior approval of research plan
- Prior notification of fishing; universal observer coverage plus “space” for at least one scientist on-board any fishing vessel



Conclusions and future issues

- Ice retreat poses considerable questions over manner, form and existence of future regulation – interesting debate over “automatic” protection for thawed areas
- MPA a potentially blunt instrument to address this – protection needs may be temporary/non-existent
- CCAMLR approach has developed a novel category of designated area based on scientific entitlements
- Lack of human activity provides a degree of protection, but SASS system provides an impetus for scientific endeavour
- Interesting test case for precautionary approach at sea
- Potential extension of practice to thawing land areas



Kiitos!!

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