

Risk adverse Science: The risk of non-supportable

- Antarctic: “Supportable” is a key point in funding decisions (McMurdo Rebuild – limited Budget).
- Arctic: Inclusion of the community critical.
- NSF – won’t fund something likely to fail
- North and South: Cold, Icy, Wavy, Long cruises with few support ports.
- “De-icing”
- Usual Players: NOAA (SWFS – no benthic surveys for a while); NSF OPP (Arctic and Antarctic); NASA (#Europa); ONR (Task Force Ocean); NPRB (Limited funding – especially ships)



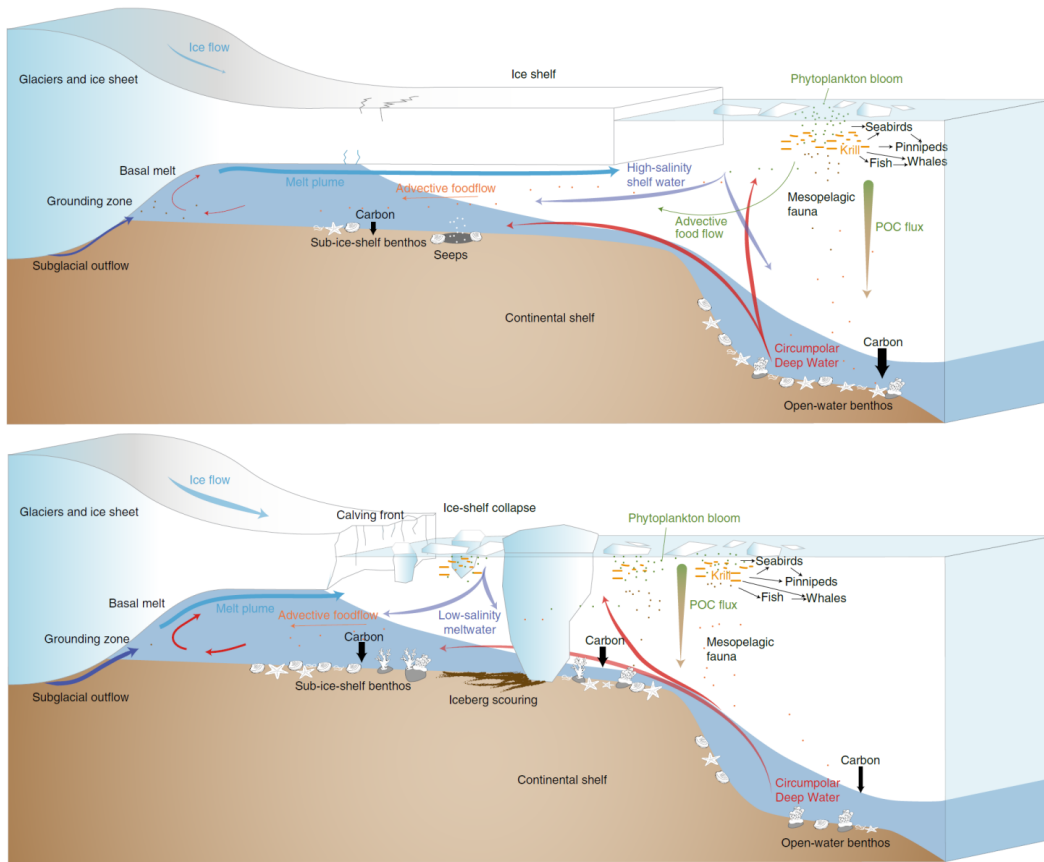
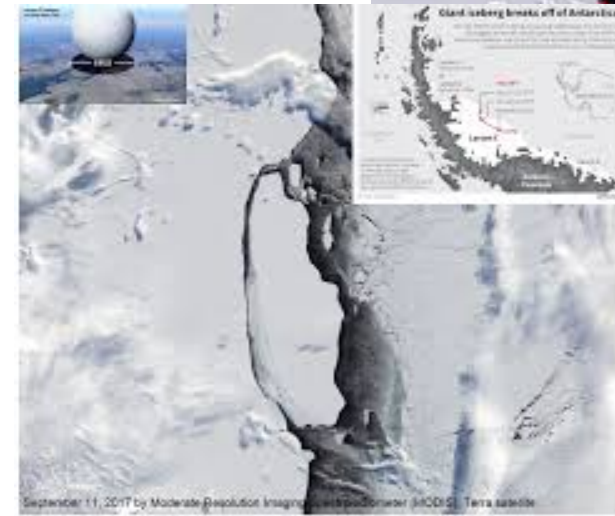
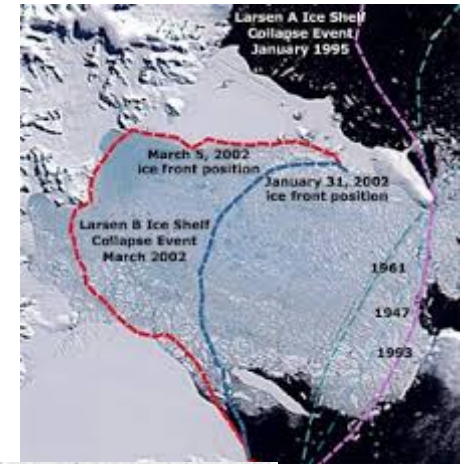
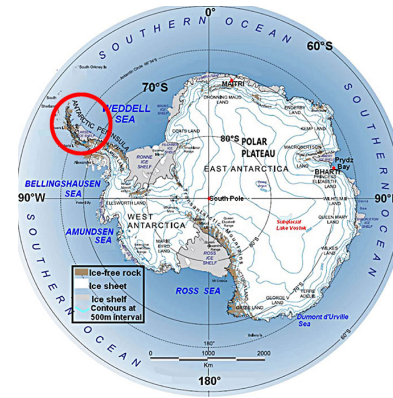


Fig. 1 | Ecosystem properties and processes shown with their responses to ice-shelf collapse. Top, Pre-collapse. Bottom, Post-collapse. Shifts in the spatial and temporal ranges of pelagic and benthic organisms, populations and communities post-collapse lead to changes in trophic dynamics and distribution ranges, altering ecosystem properties, processes and functions of sub-ice shelf areas. Thin black arrows between biota associated with krill indicate trophic interactions. The colour gradient of the particulate organic carbon (POC) flux indicates the change from fresh to more degraded/refractory material. Thicker arrows indicate higher fluxes. Figure adapted from ref. 5, AGU.



The scientific response to Antarctic ice-shelf loss

Biological communities beneath Antarctic ice shelves remain a mystery, hampering assessment of ecosystem development after ice-shelf collapse. Here we highlight major gaps in understanding of the patterns and processes in these areas, and suggest effective ways to study the ecological impacts of ice-shelf loss under climate change.

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If we want to engage polar researchers

Communicate

- Programmatic potential (i.e. supportable)
- Weather window (i.e. supportable)
- Ice Confidence (i.e. supportable and success potential)
- Ships (IB Palmer, RV Gould, RV Sikuliaq/ supportable)
- No 3 year+ delay for use.
- Human aspect (Arctic).

