

The Ross Sea region MPA



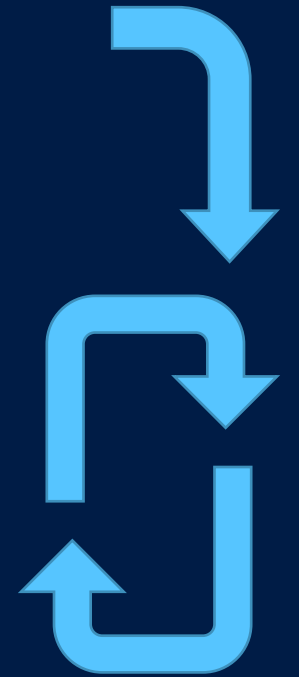
NOAA FISHERIES

George M. Watters

Southwest Fisheries Science Center

Key elements of CCAMLR MPA process

- Collate data and map everything
- Define national priorities and policy aims – link these to the maps
- Consider alternative boundaries etc. to achieve policy aims
- Negotiate collective set of objectives, boundaries, etc.



"Planning Domain 8"

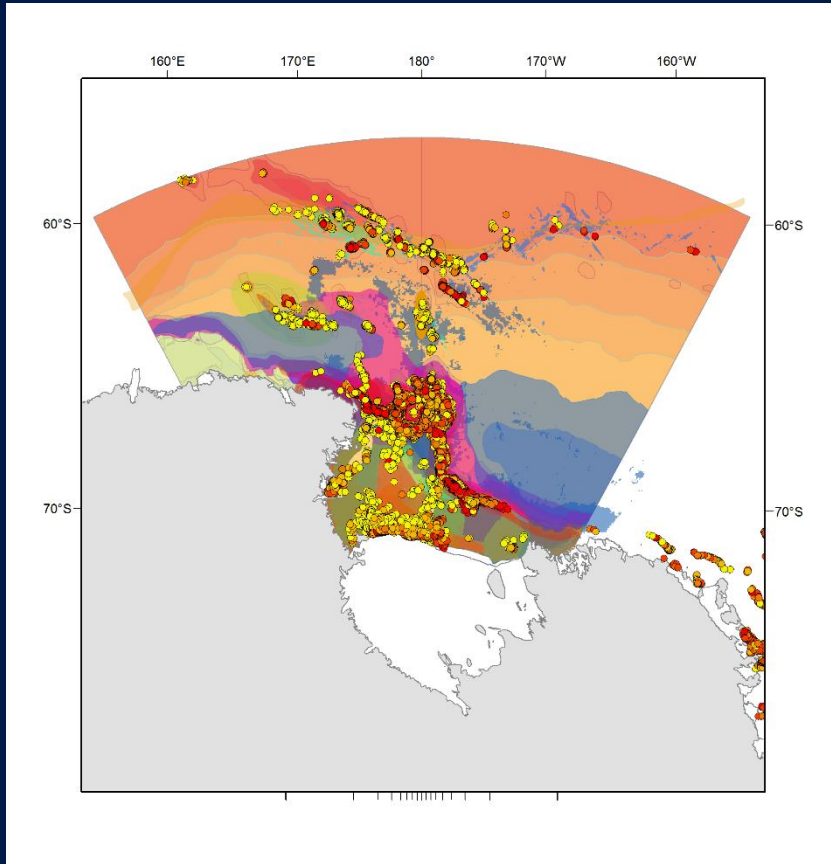


NOT the MPA!

The past

USA → USA + NZ → USA + NZ + 23 OTHER MEMBERS

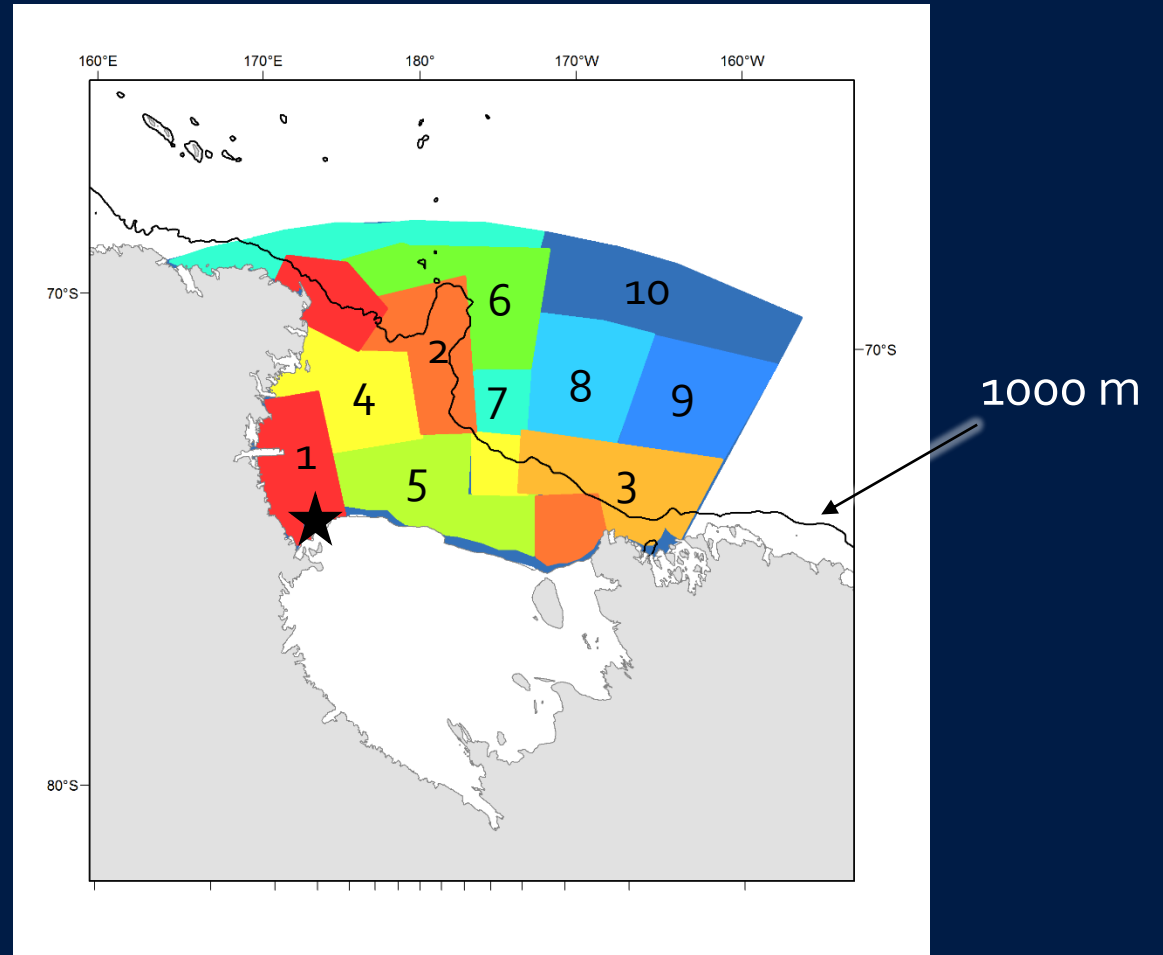
U.S. stakeholder objectives



- Protect air-breathing predators
- Protect benthic communities
- Maximize biodiversity
- Maximize rebuilding potential for blue whales
- Protect “depauperate basin assemblages”

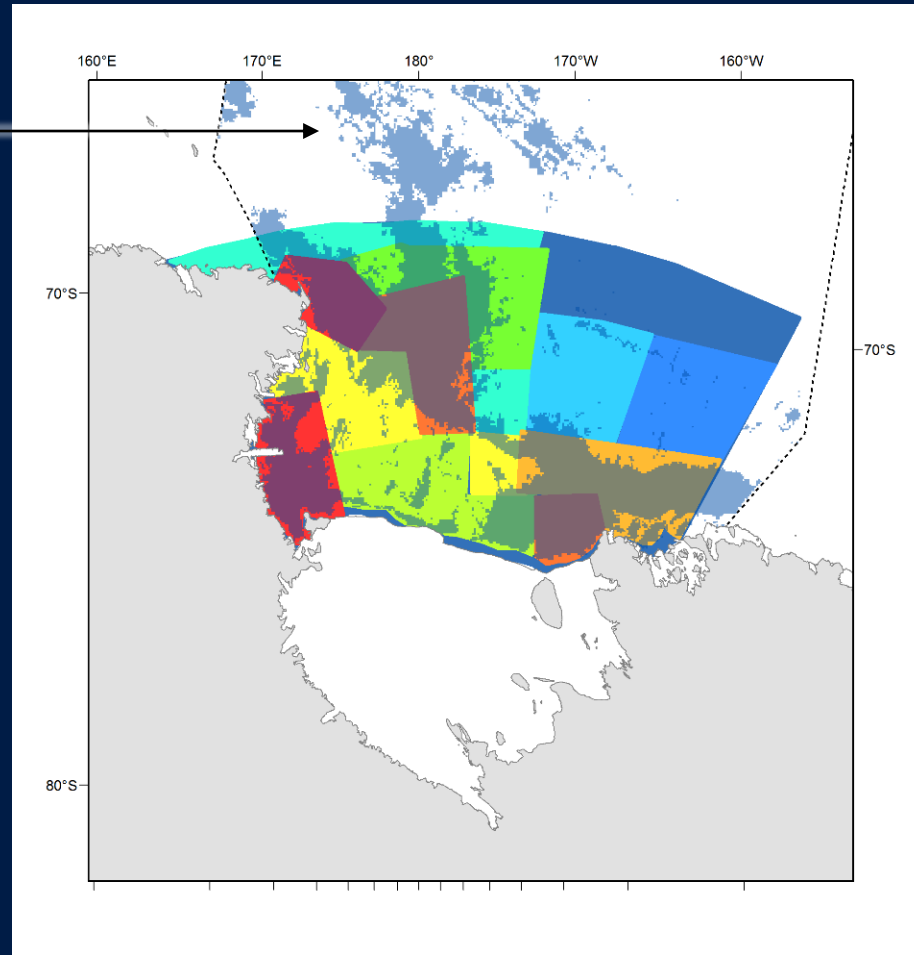
Spatial priorities for protection

- What MPA boundaries would you draw if you could only protect 10% of the area?
- What if you could protect another 10% (and so on)?



Overlay with 1° objective

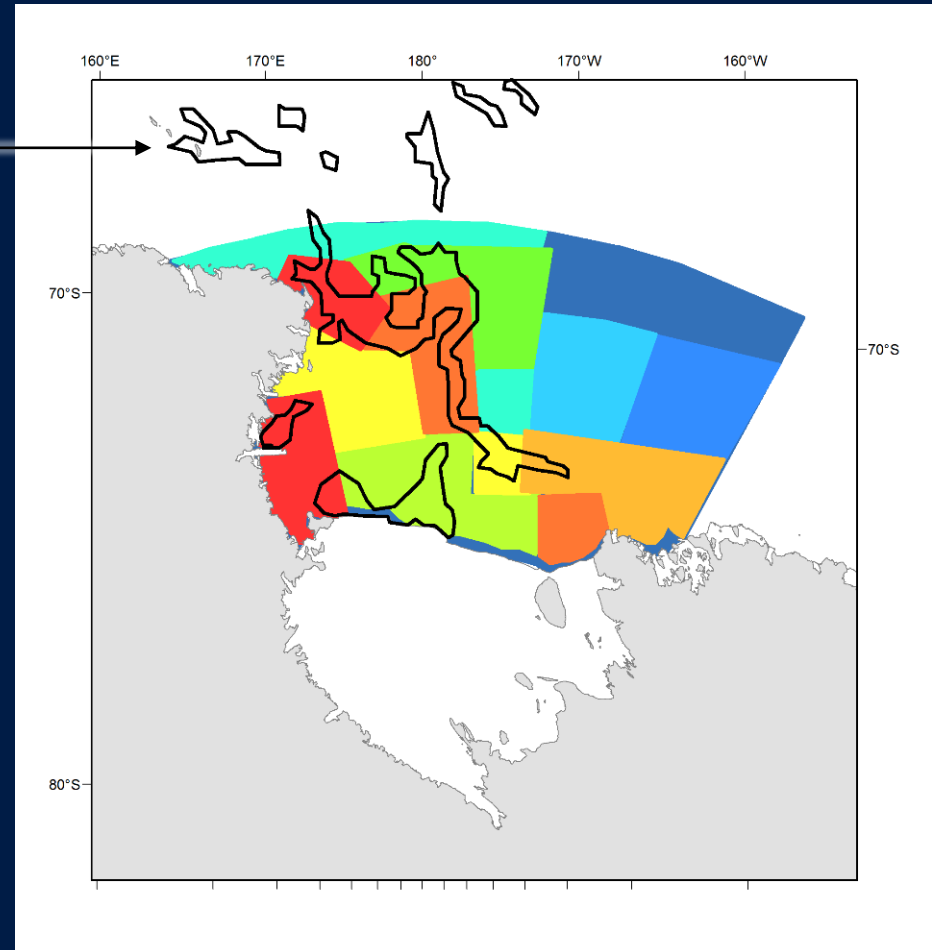
important habitats
for air-breathing
predators



Overlay with fishing

important fishing areas
(Antarctic toothfish,
1997-2011)

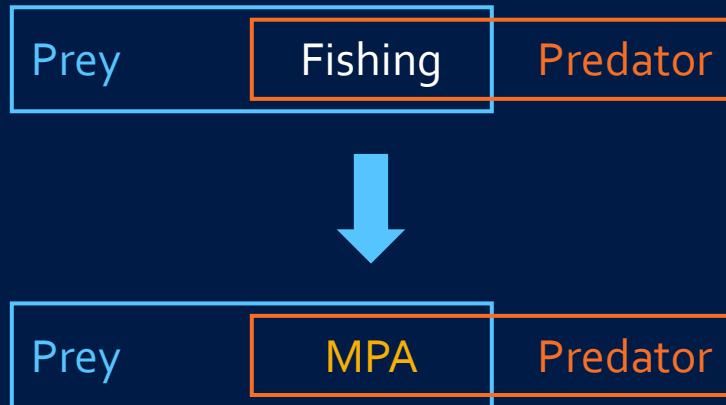
- displace > 50% of fishing to protect top 20% of U.S. stakeholder priorities
- displace 100% to protect top 60%



Two planning pathologies

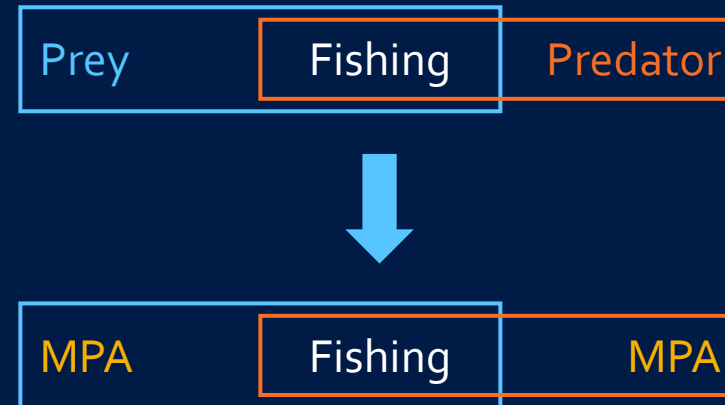
DISEASE 1

- Protect 50% of prey and predator habitats where the ecology occurs



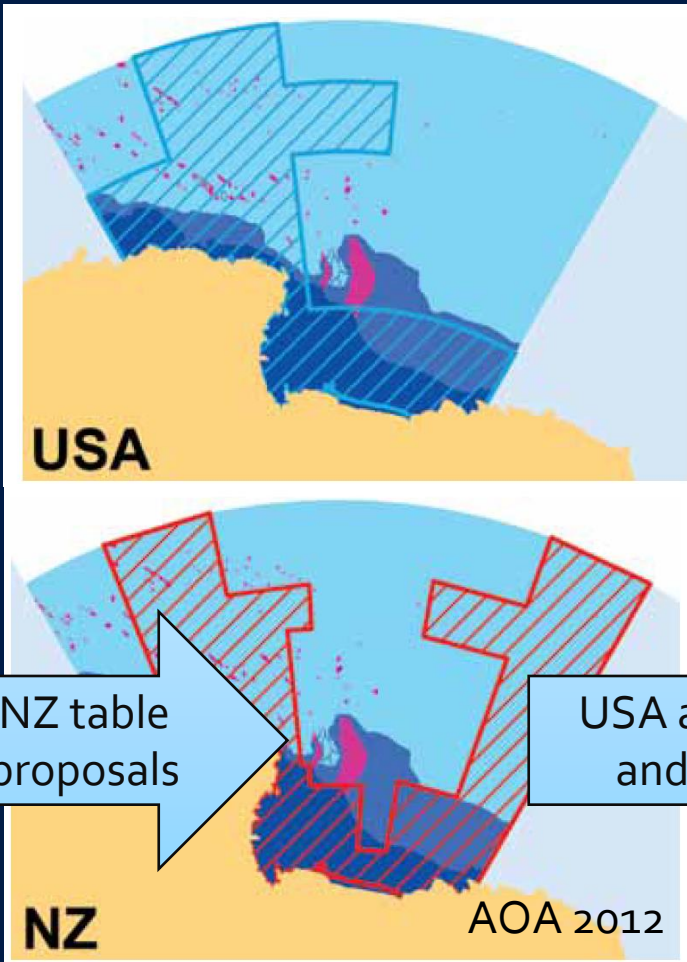
DISEASE 2

- Protect 50% of prey and predator habitats while minimizing cost



1.5 yrs bilateral negotiations

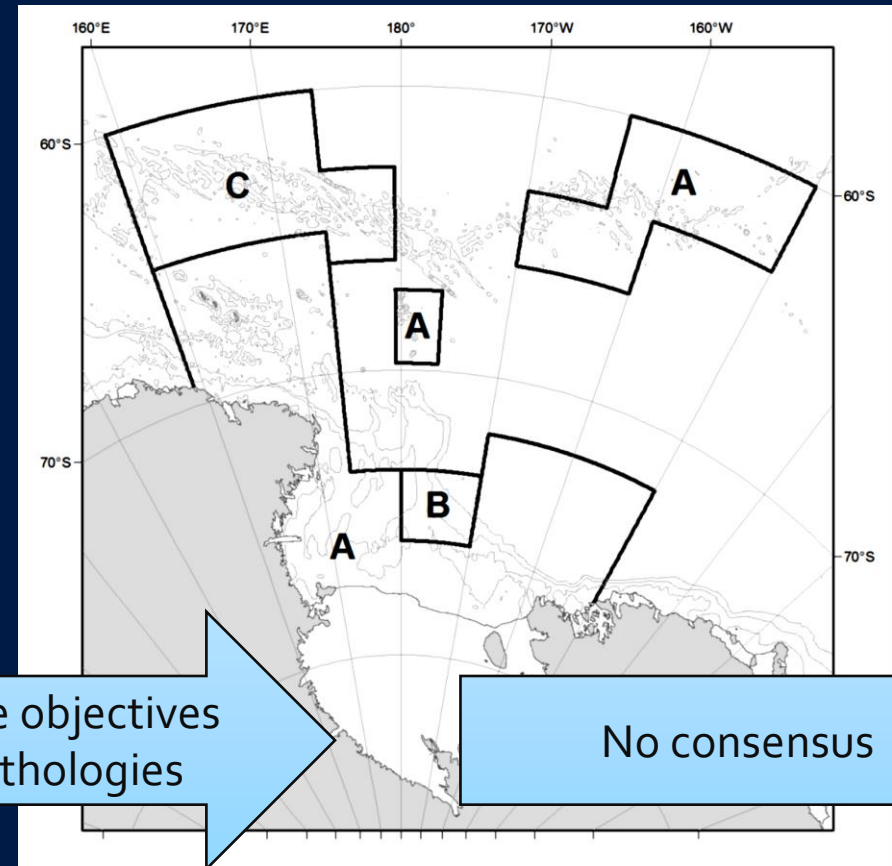
2012



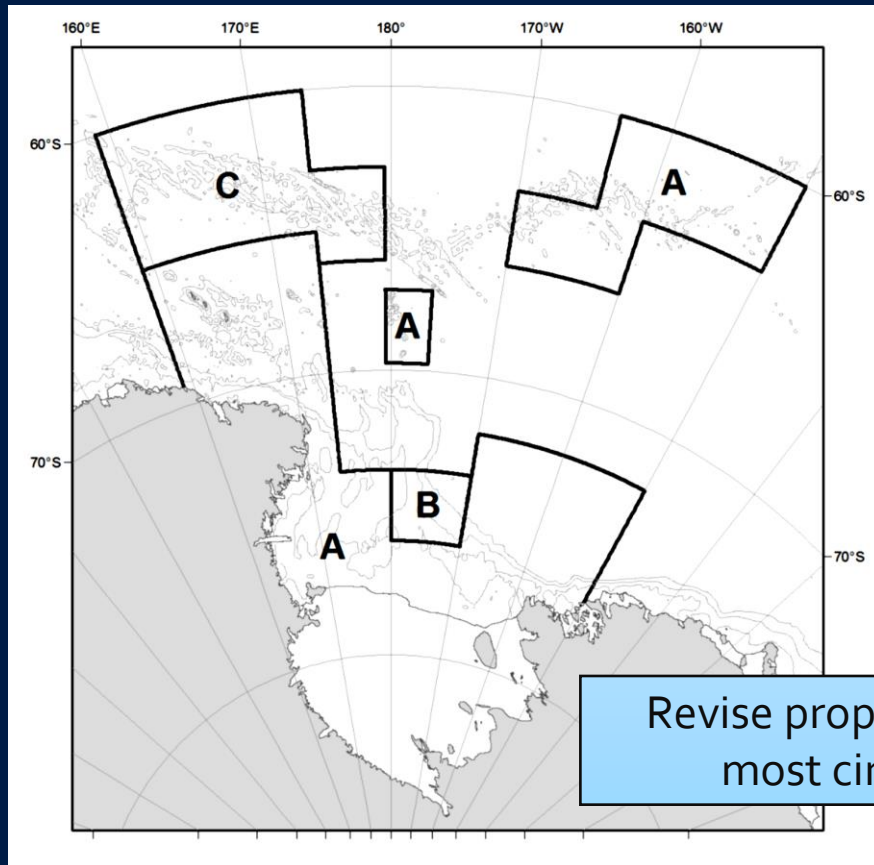
USA and NZ table separate proposals

USA and NZ share objectives and combine pathologies

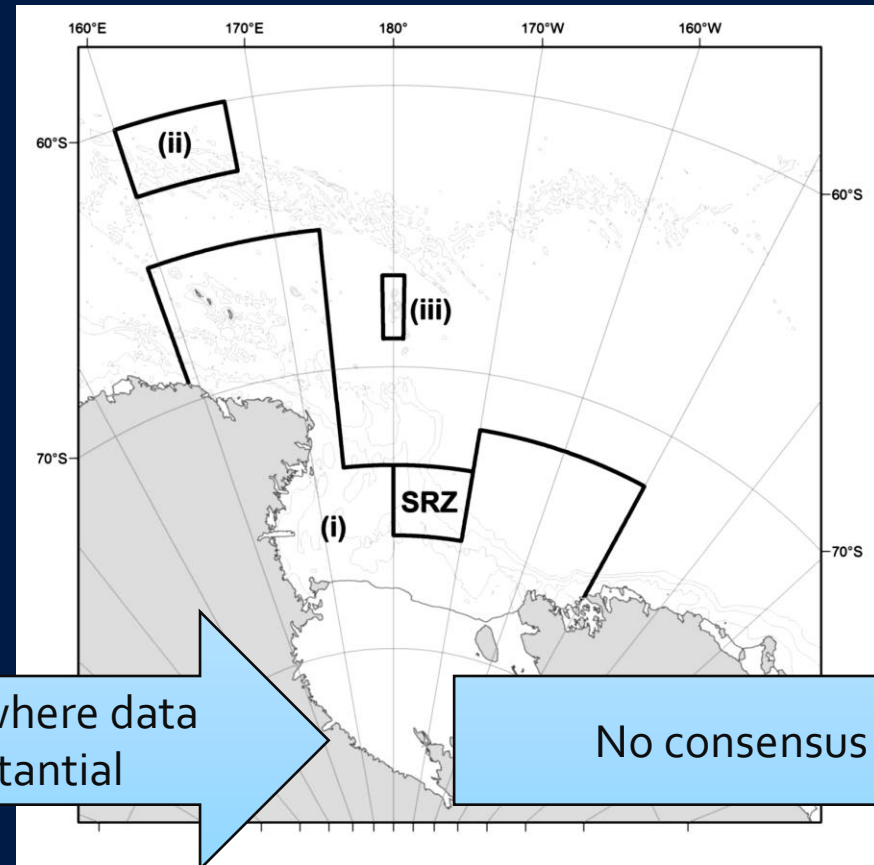
No consensus



2013

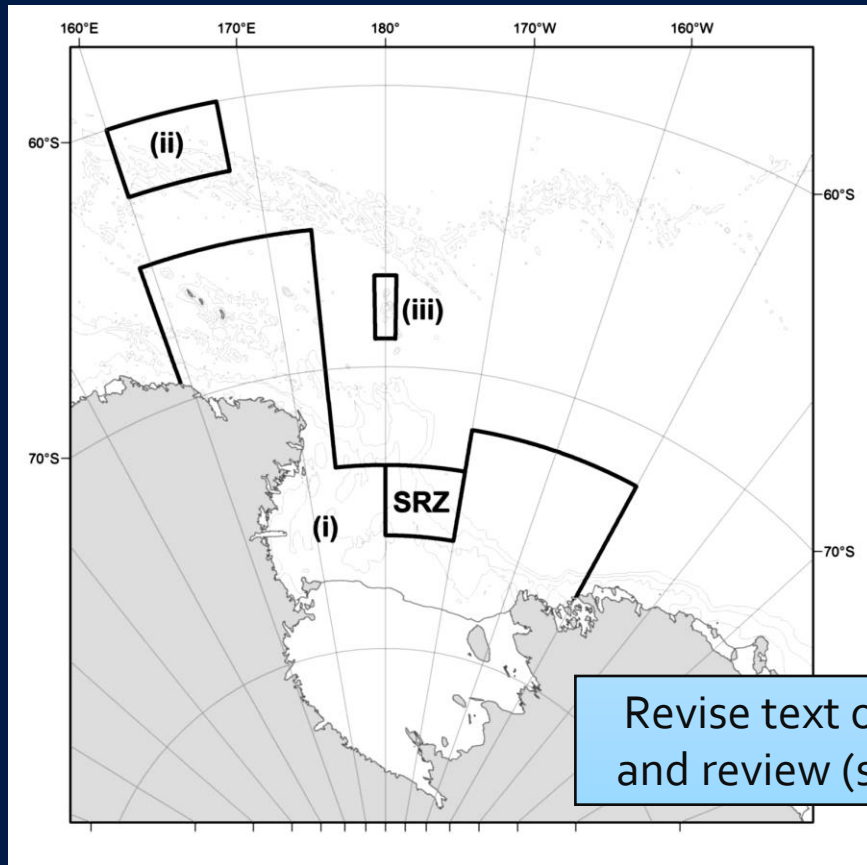


Revise proposal where data most circumstantial

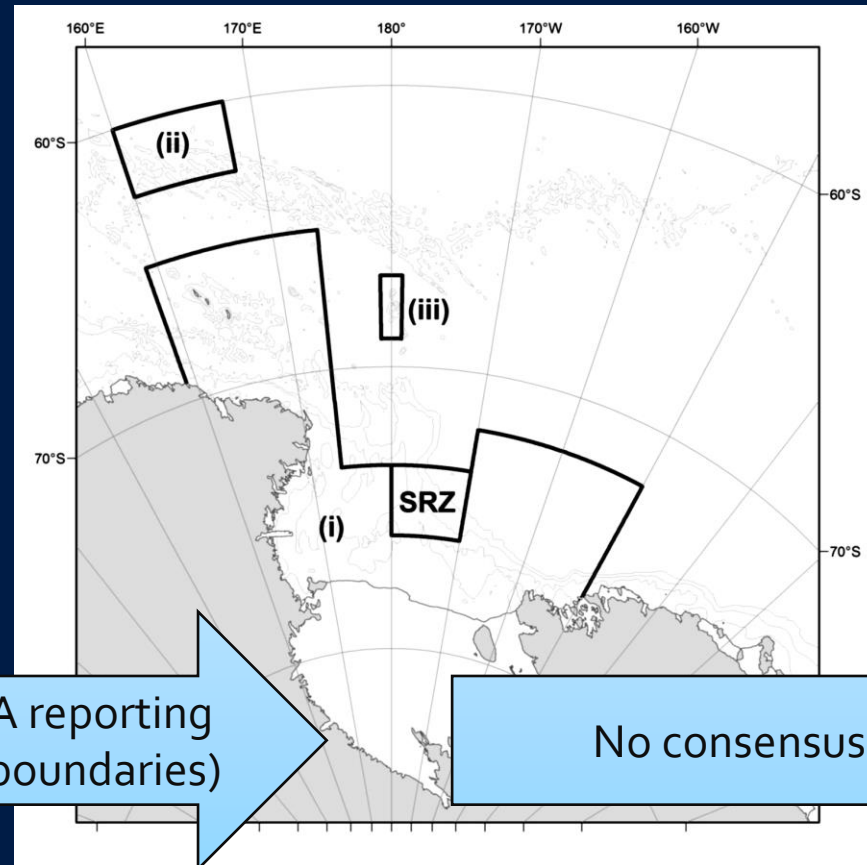


No consensus

2014

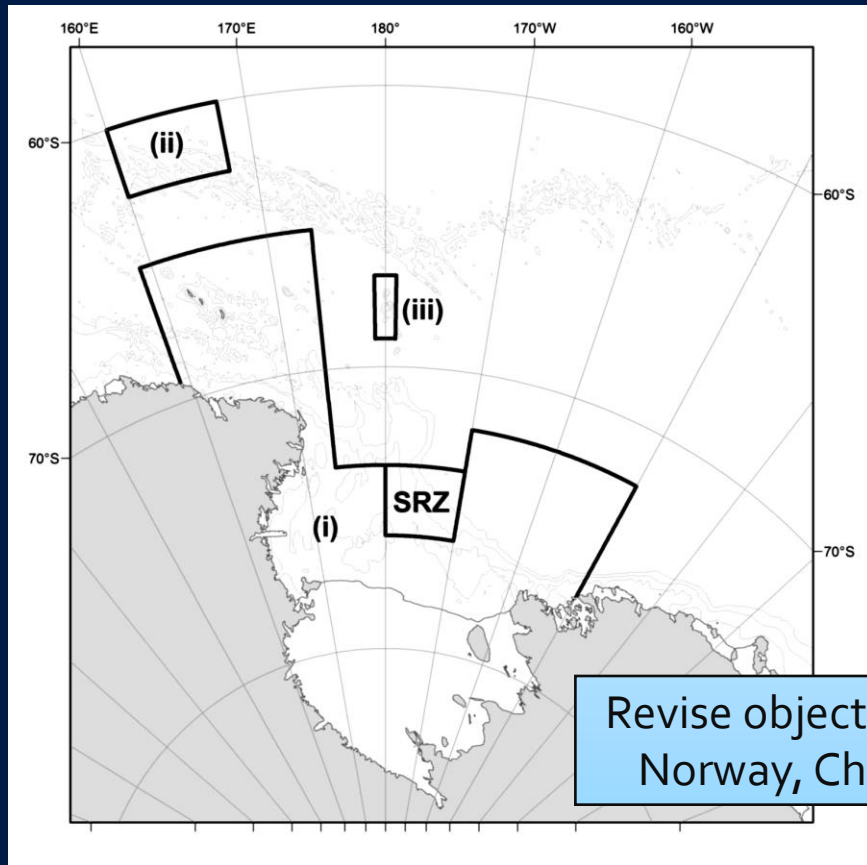


Revise text on MPA reporting and review (same boundaries)

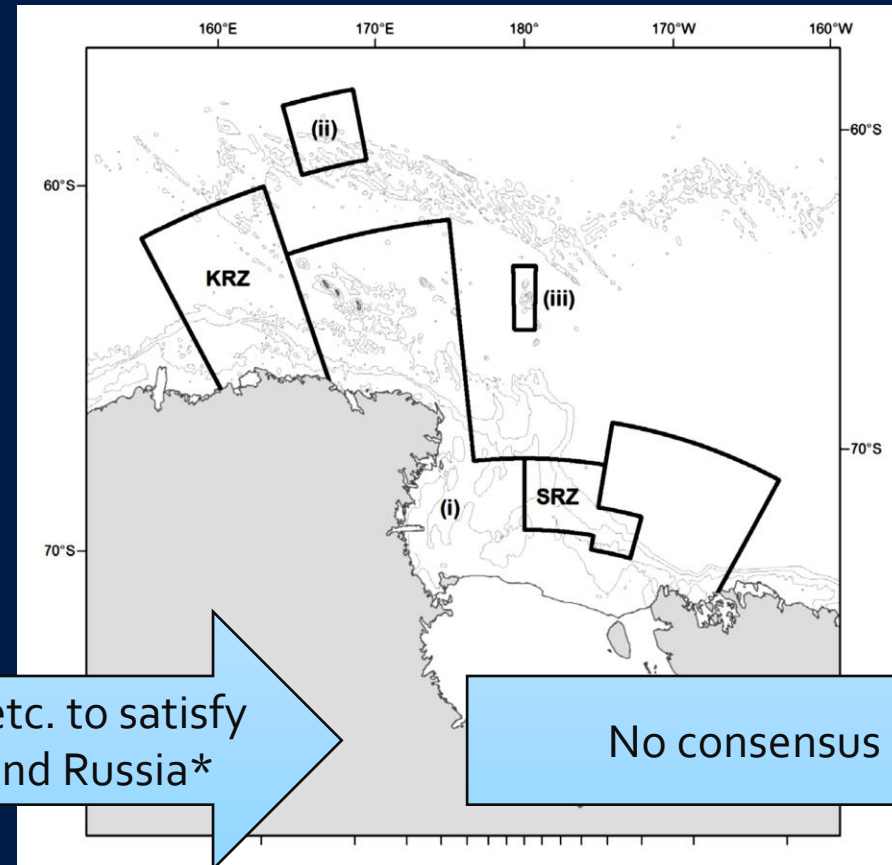


No consensus

2015

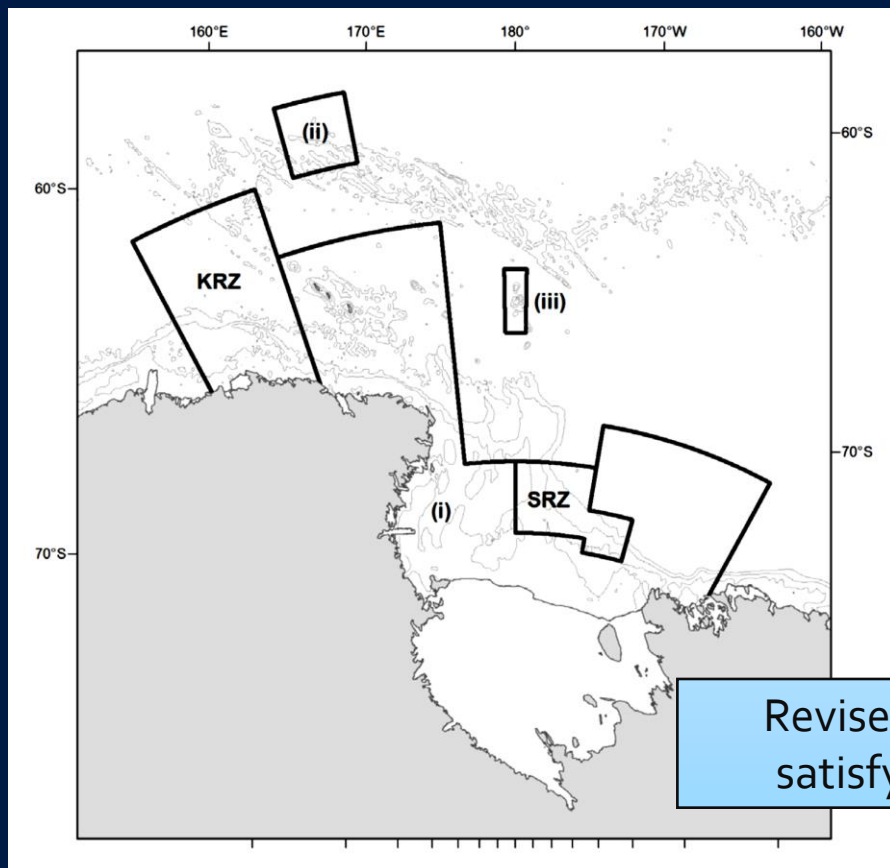


Revise objectives etc. to satisfy Norway, China, and Russia*



No consensus

2016

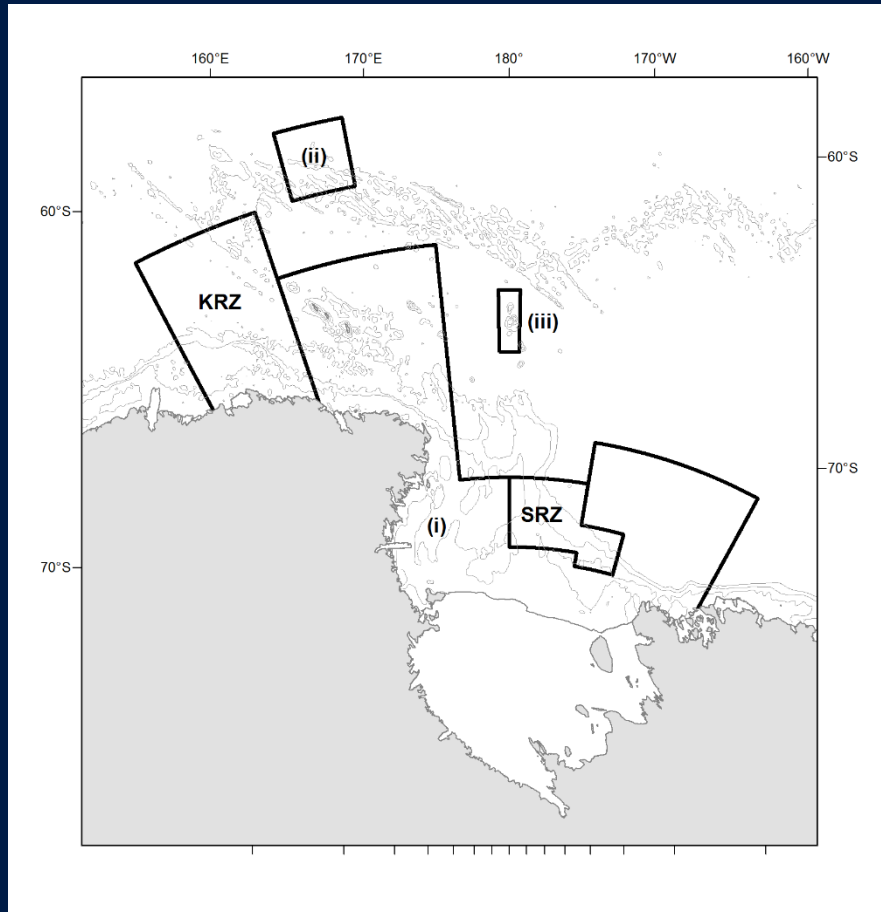


Revise limits on fishing to satisfy Russia + duration

The present

A CCAMLR MPA

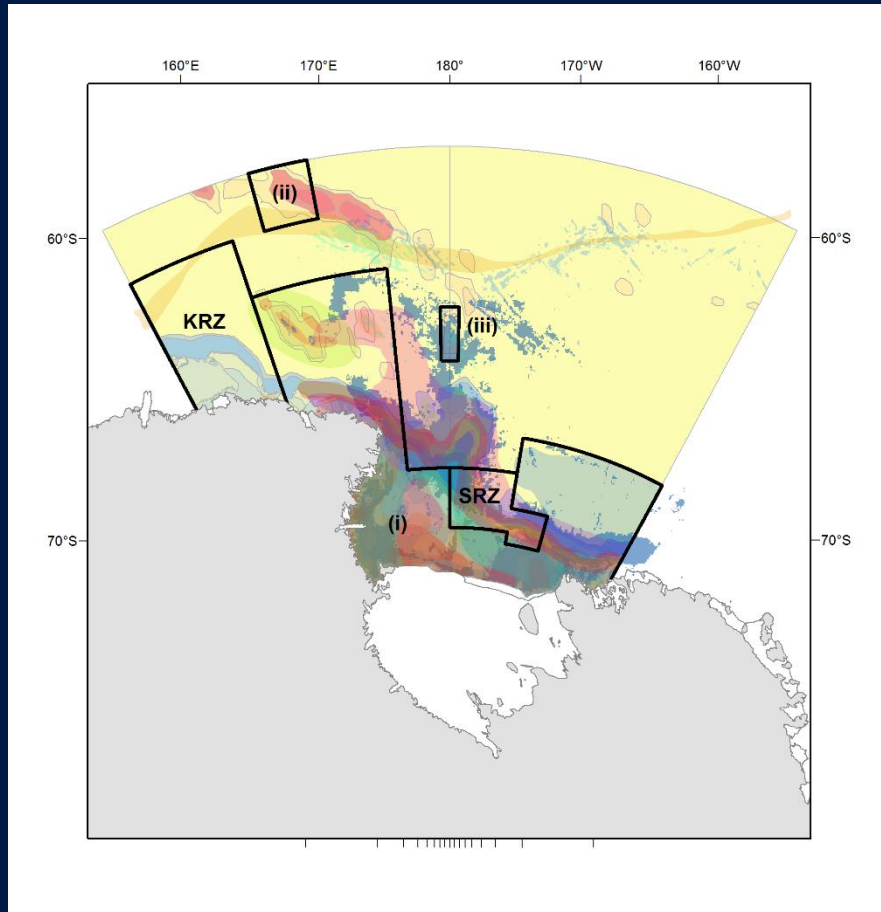
RSRMPA



- 11 specific objectives
- 3 zones
- 35 yrs beginning 1 Dec 2017
- Review at least every 10 yrs
- Research and Monitoring Plan submitted

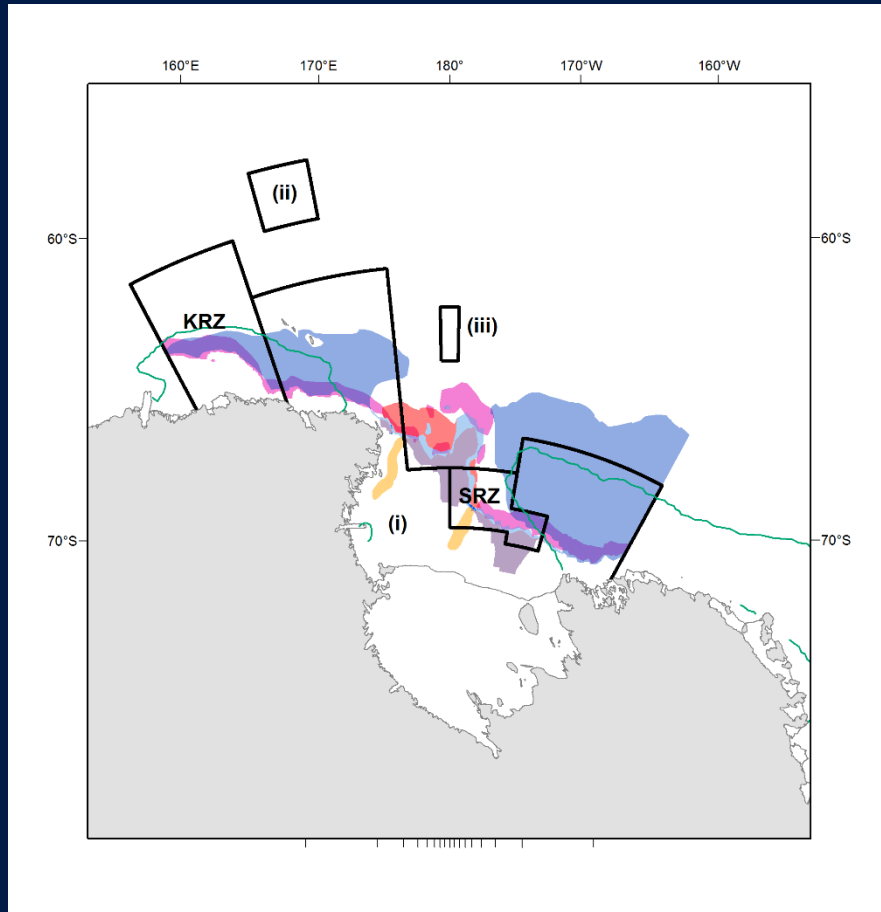
Conservation Measure 91-05 (CCAMLR 2016)

Protection objectives



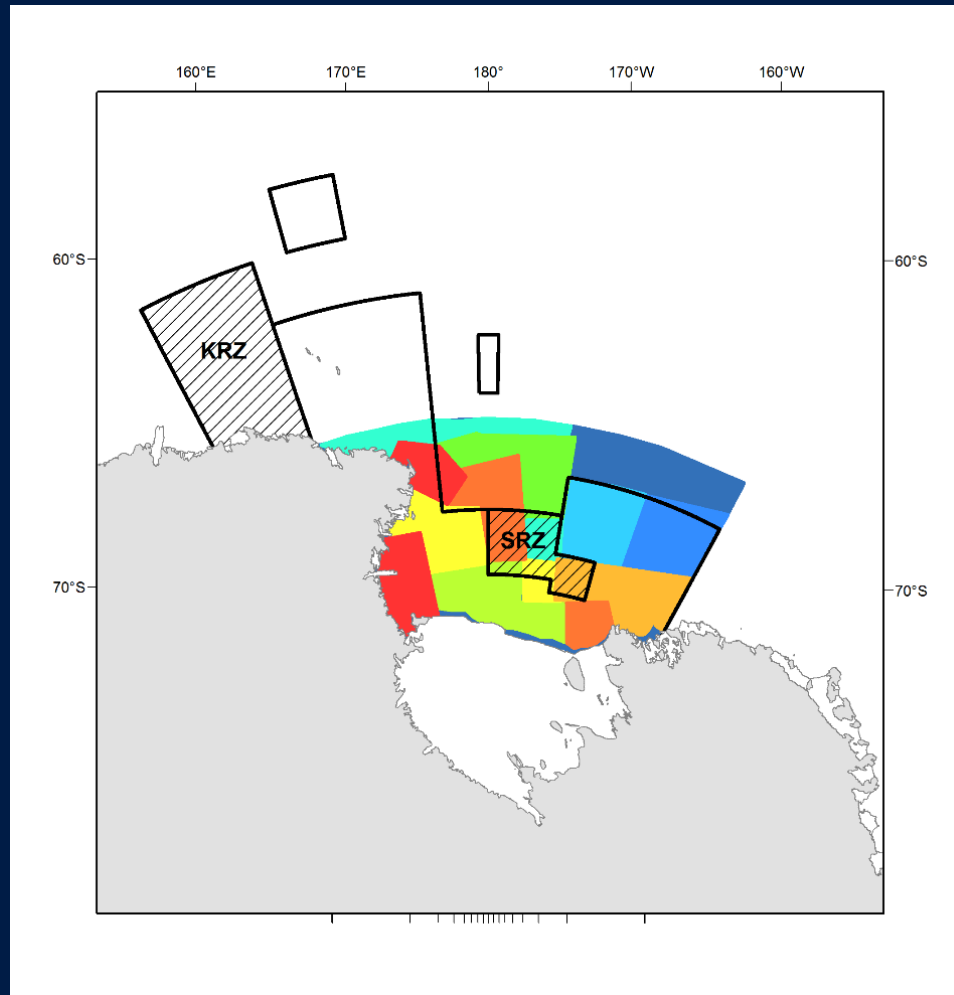
- “representative” benthic and pelagic bioregions
- large-scale “ecosystem-process areas”
- core distributions of key prey species
- core foraging areas of land-based predators or those possibly in direct competition with fisheries
- coastal locations of ecological importance
- toothfish habitats
- rare or vulnerable benthic habitats

Science objectives



- Spatial comparisons to learn about ecosystem effects of fishing and climate change
- Tagging to underpin toothfish stock assessment and learn about their distribution and movement
- Studies to understand ecosystem role of krill

U.S. stakeholder priorities revisited



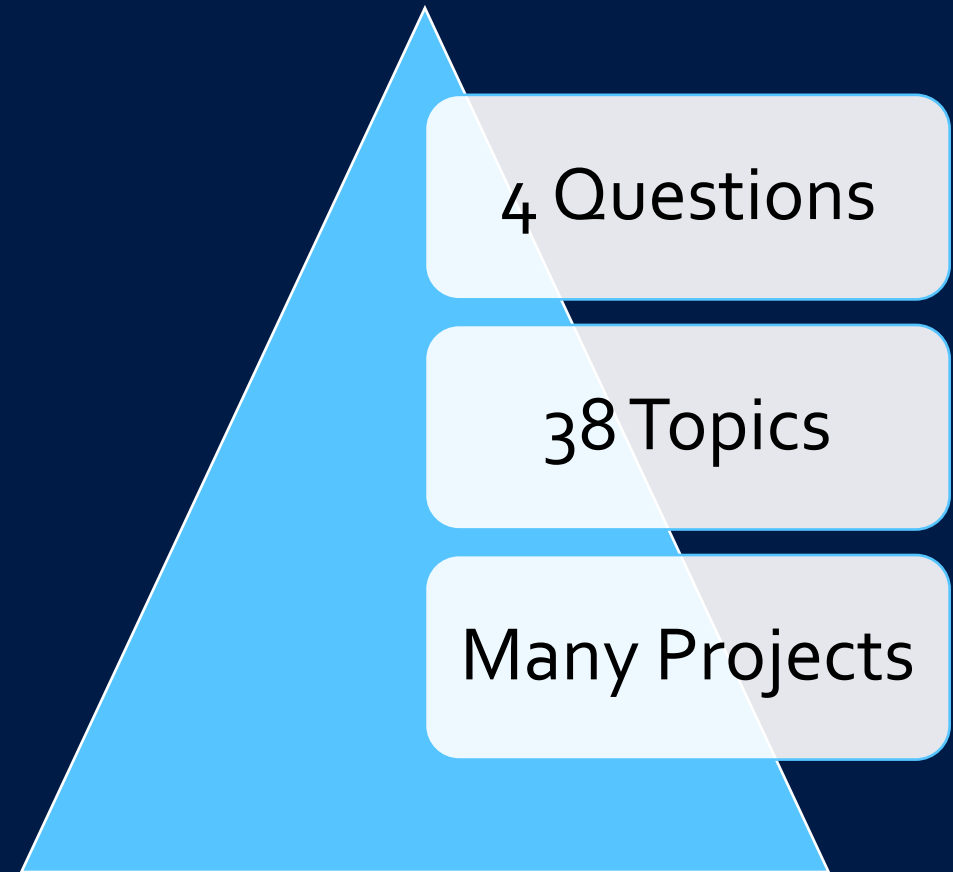
The future

EVALUATING CCAMLR'S RSRMPA

Research and Monitoring Plan

Deliver knowledge to assess

- degree to which objectives being achieved
- degree to which objectives still relevant in given location
- actions to improve achievement of objectives



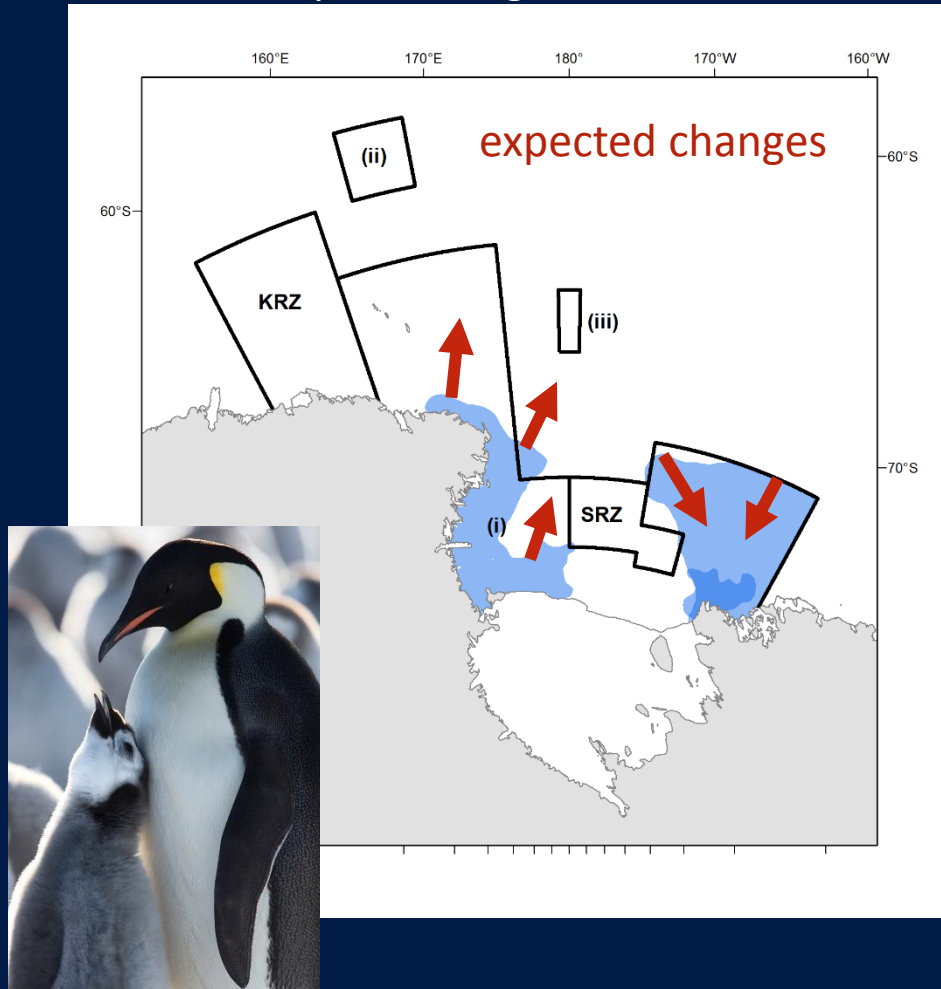
Questions

1. Does the RSRMPA adequately encompass *stuff* included pursuant to its objectives?
2. What are the ecosystem roles of *stuff* that is (not) encompassed by the RSRMPA?
3. How is *stuff* affected by fishing, the environment, etc.?
4. Does *stuff* differ inside and outside the RSRMPA?

stuff = habitats, processes, populations, communities, etc.

Example

Emperor Penguin Habitats



Question 1: Does the MPA “adequately encompass” stuff?

Topic 17: “Movements and foraging requirements of ... emperor penguins in the eastern RSR.”

Project X: Tracking study of emperor penguins

