

Impacts of regional climate change on the population dynamics of Antarctic krill

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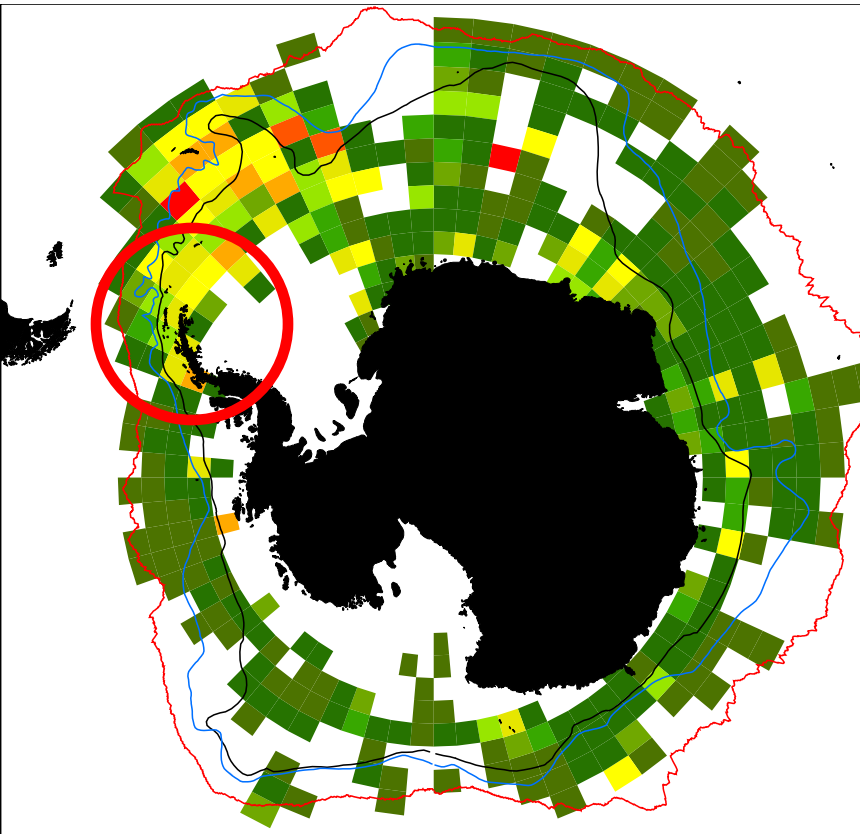


**Marine Ecosystems
Research Programme**

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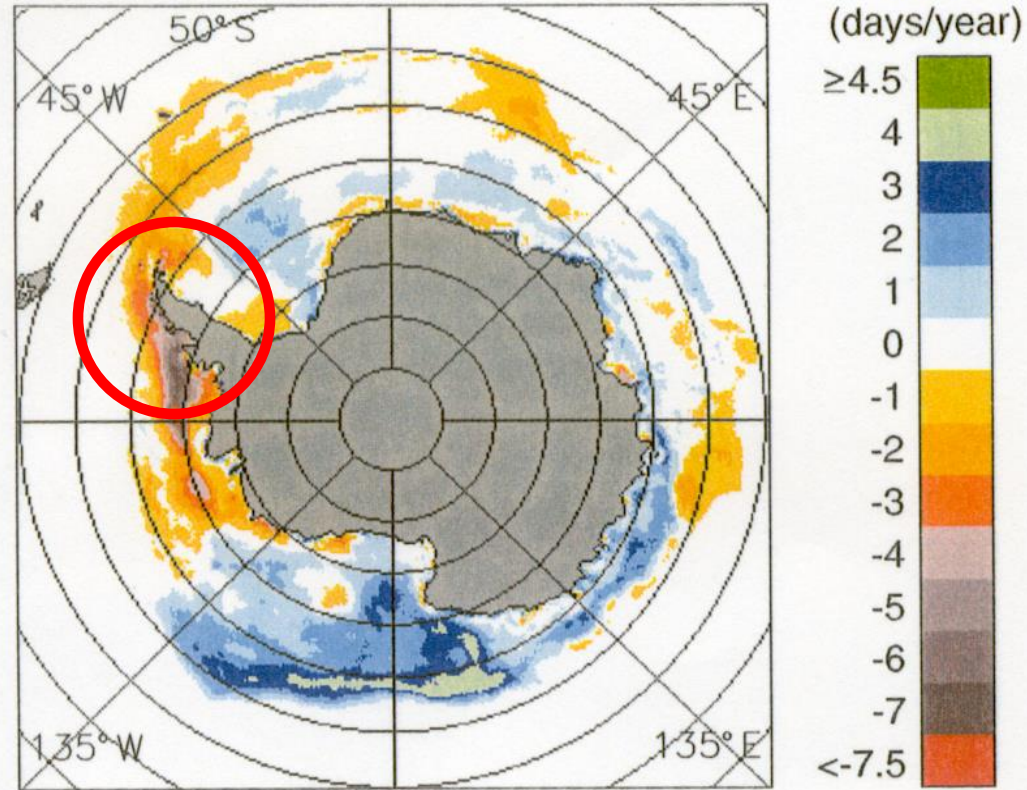
1. Krill fisheries and rapid climate change
2. Temporal and spatial trends
3. Potential drivers of the trends
4. Projected krill trajectories

Implications of regional scale climatic change



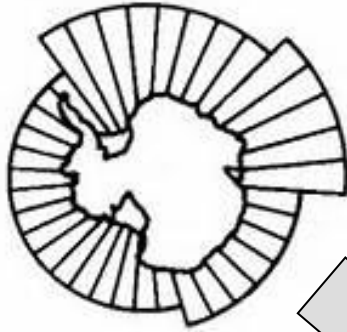
Krill distribution and main spawning area

a. 1979-99 (15% cut-off)



Shortening winter ice duration
(Parkinson 2002 *Ann Glaciol* 34, 2002
Stammerjohn et al. 2012 GRL)

Fisheries management

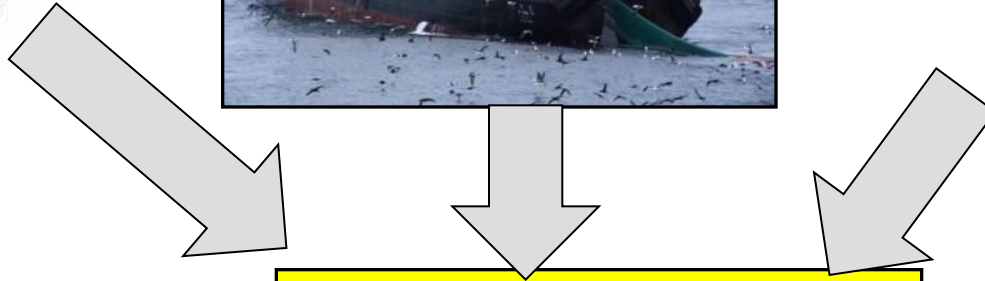


CCAMLR

Fisheries

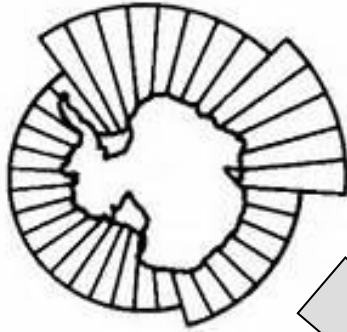


Conservation



**We need enough krill
in 20 years time!**

Fisheries management



CCAMLR

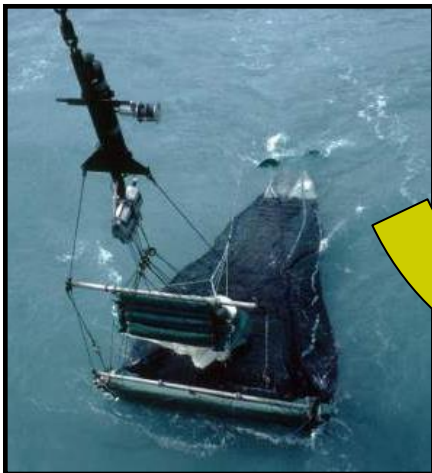
Fisheries



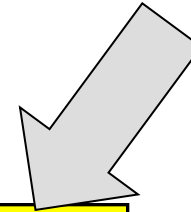
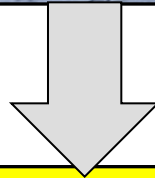
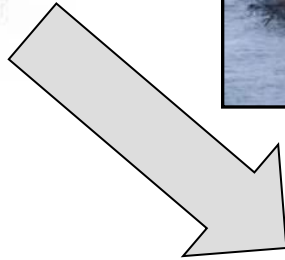
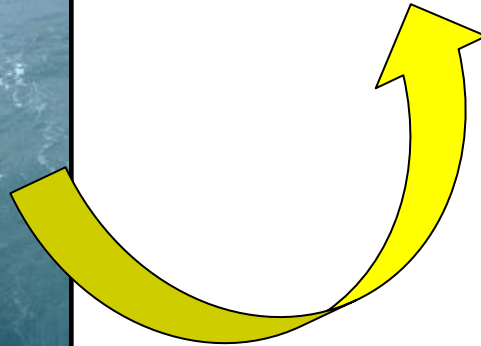
Conservation



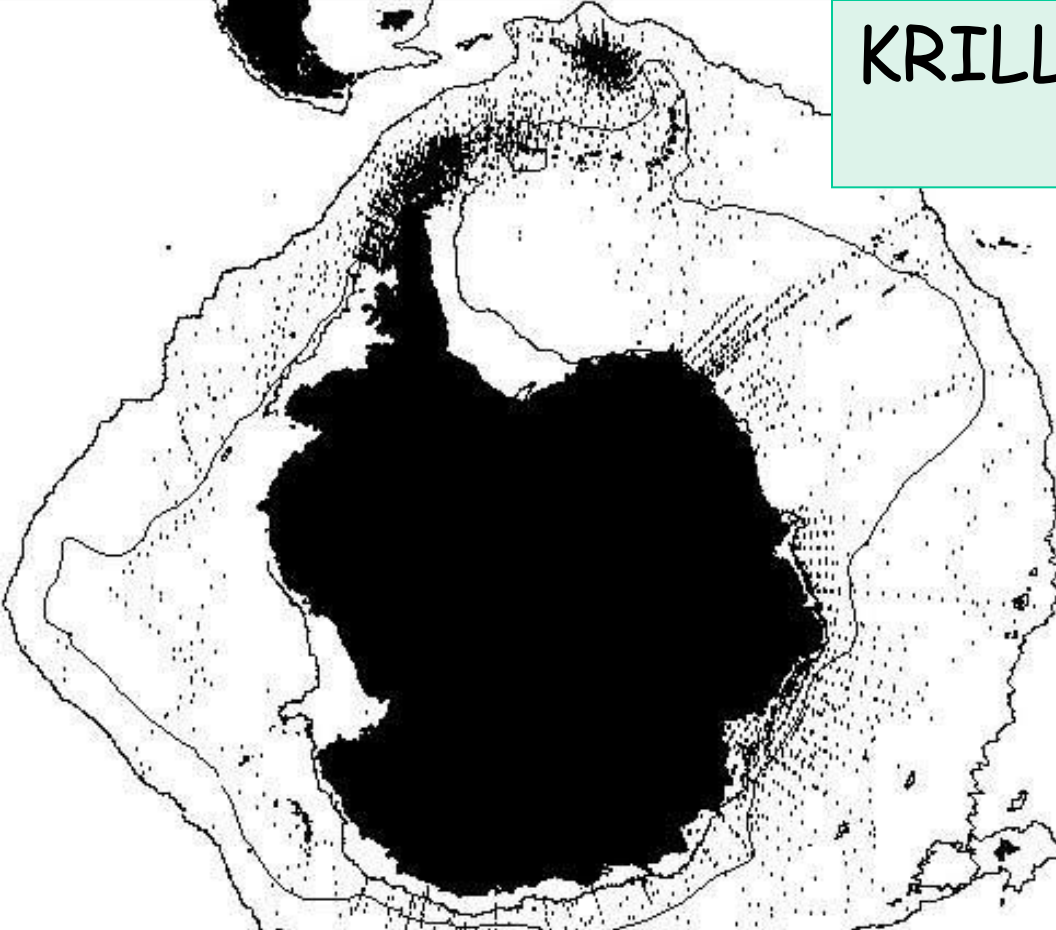
Science



We need enough krill in 20 years time!

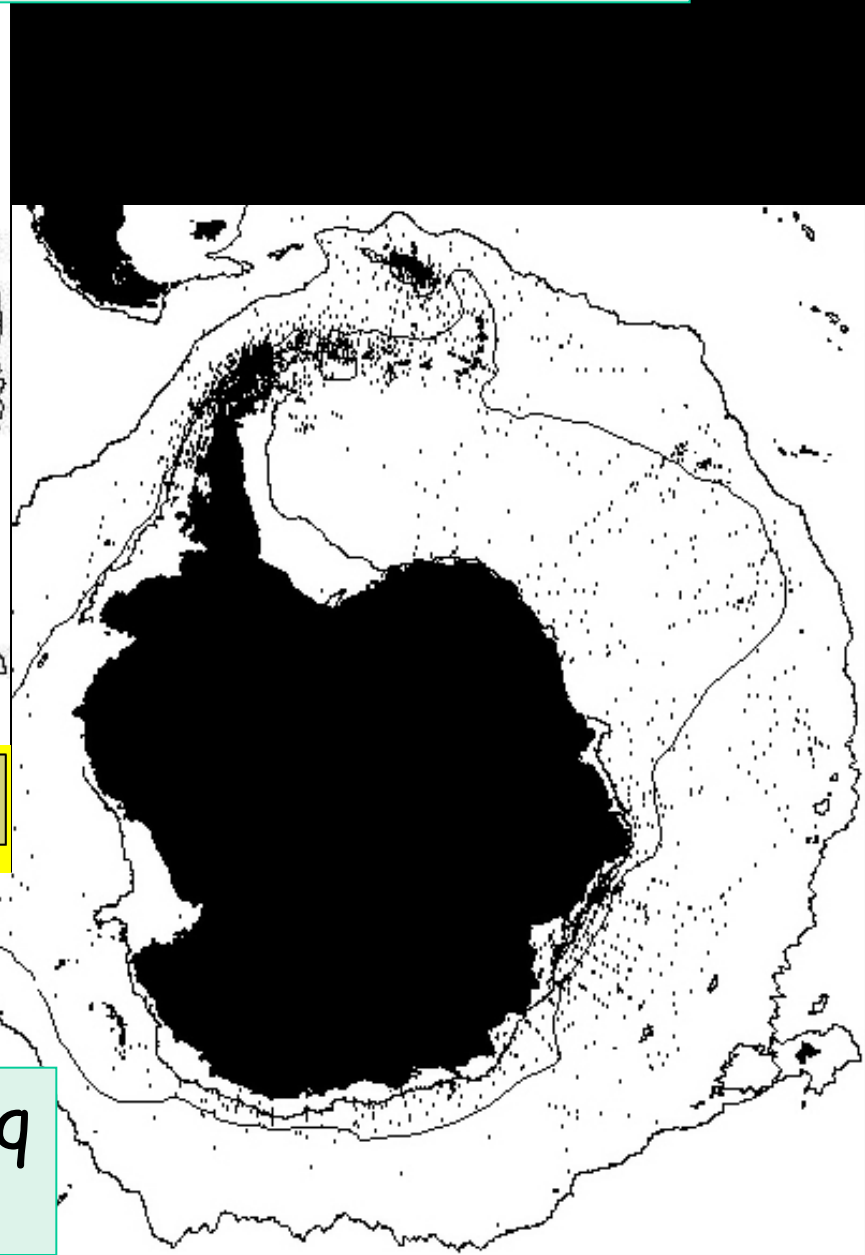


KRILLBASE: abundance
1926-2011

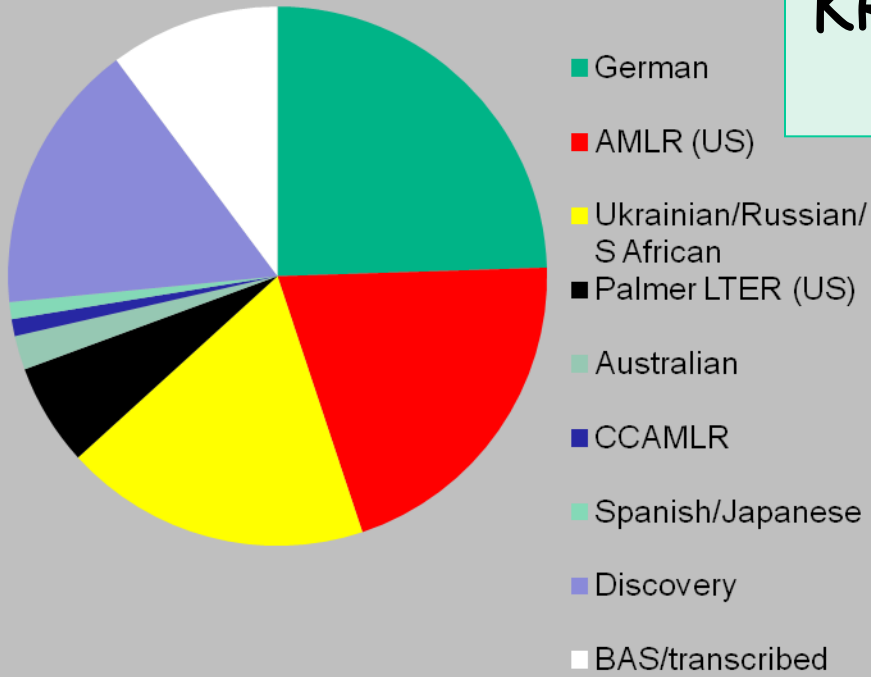


www.iced.ac.uk/science/krillbase.htm

KRILLBASE: length freq
1926-2014

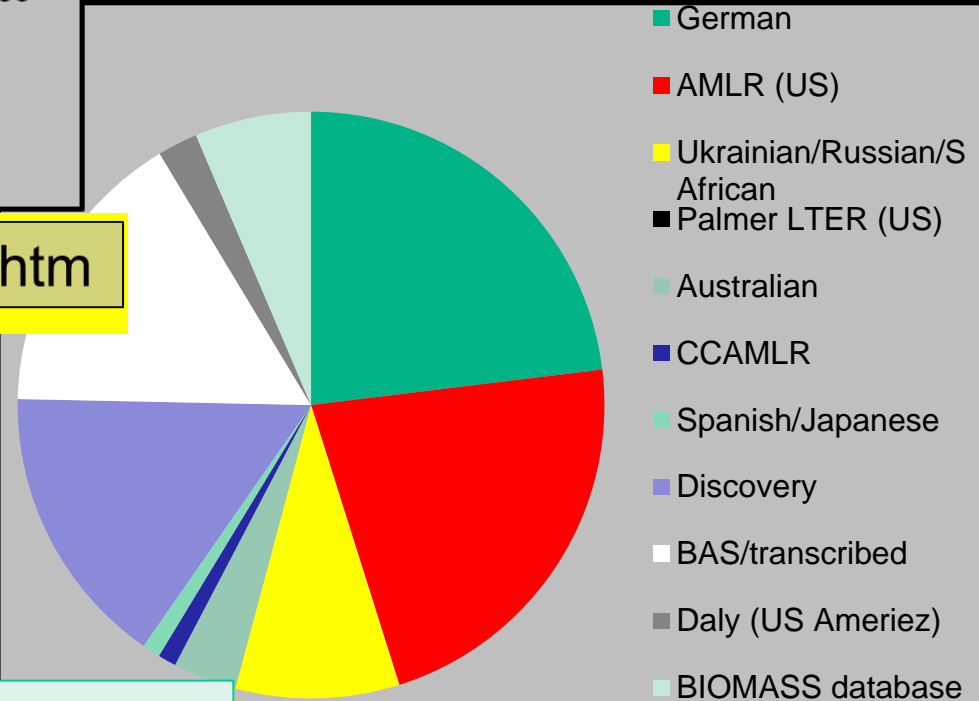


KRILLBASE: abundance
13,000 stations



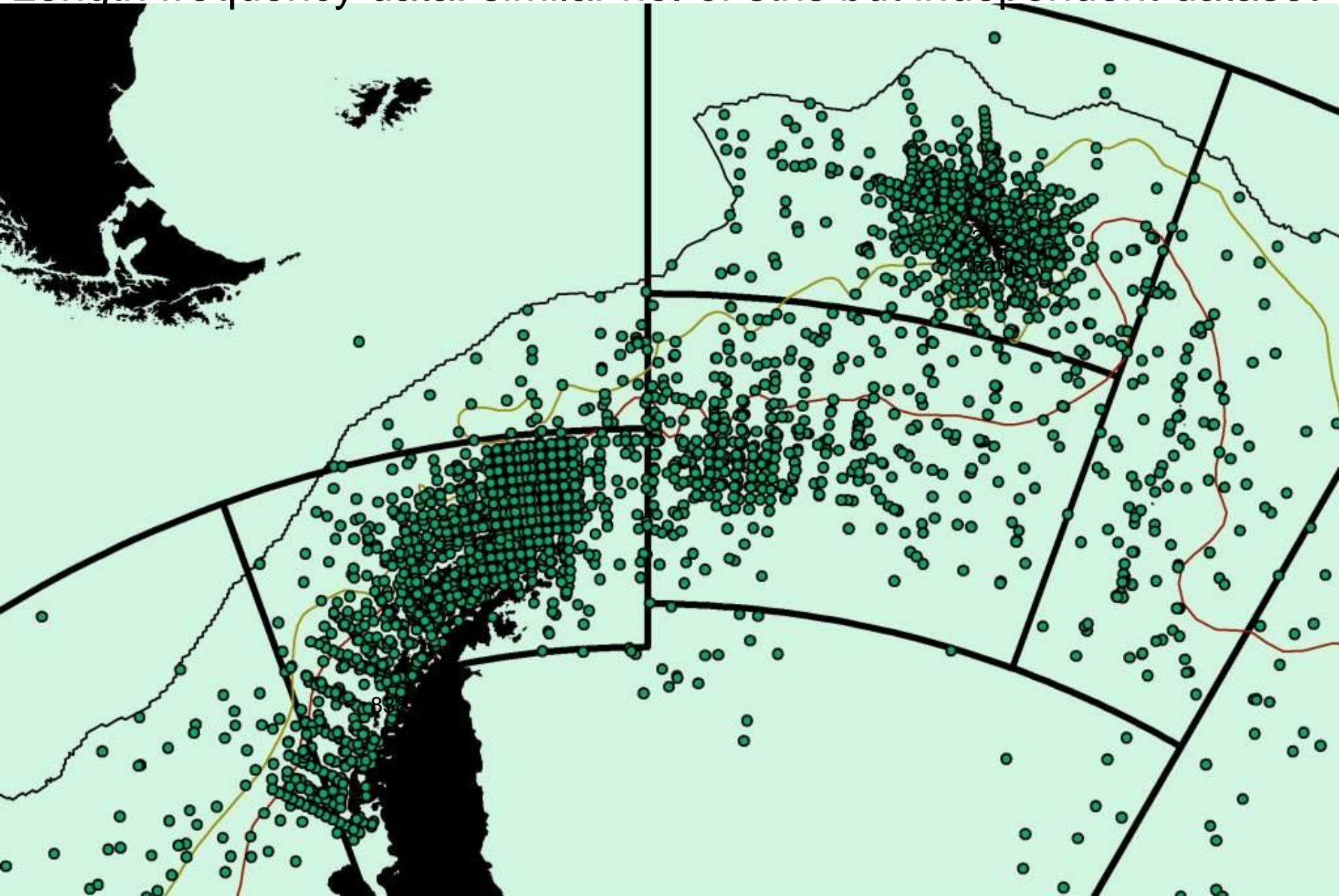
www.iced.ac.uk/science/krillbase.htm

KRILLBASE: length freq
1.3 million krill



SCIENTIFIC NETS COMPONENT

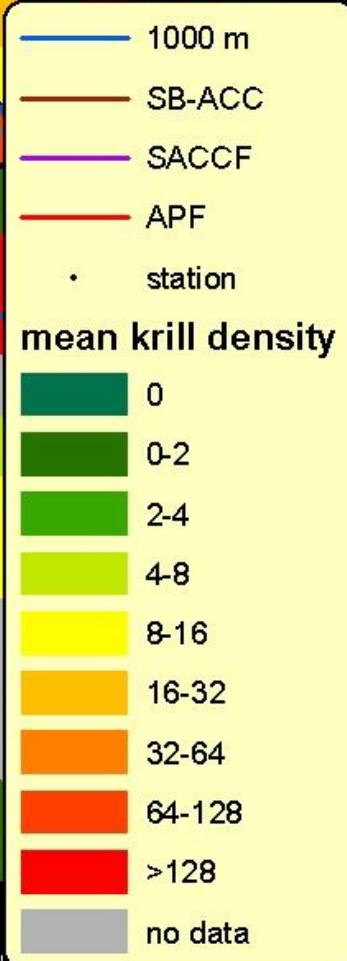
Abundance data 20°-80°W, 50°-70°S: 7540 hauls 1976-2011
Length frequency data: similar no. of stns but independent dataset



oceanic in north

shelf in south

Antarctic Peninsula



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With thanks for data and input from
KRILLBASE contributors:

Valerie Loeb, Roger Hewitt, Mark Jessopp,
Kendra Daly, Natalie Ensor, Helen Peat, Catherine
Brewster, Robin Ross, Langdon Quetin,
Graham Hosie, Steve Nicol,, Sanae Chiba,
Kendra Daly, Bjorn Krafft, Jun Nishikawa, Peter Ward,
Geraint Tarling, Ricardo Anadon,
So Kawaguchi, Roshni Subranamanian