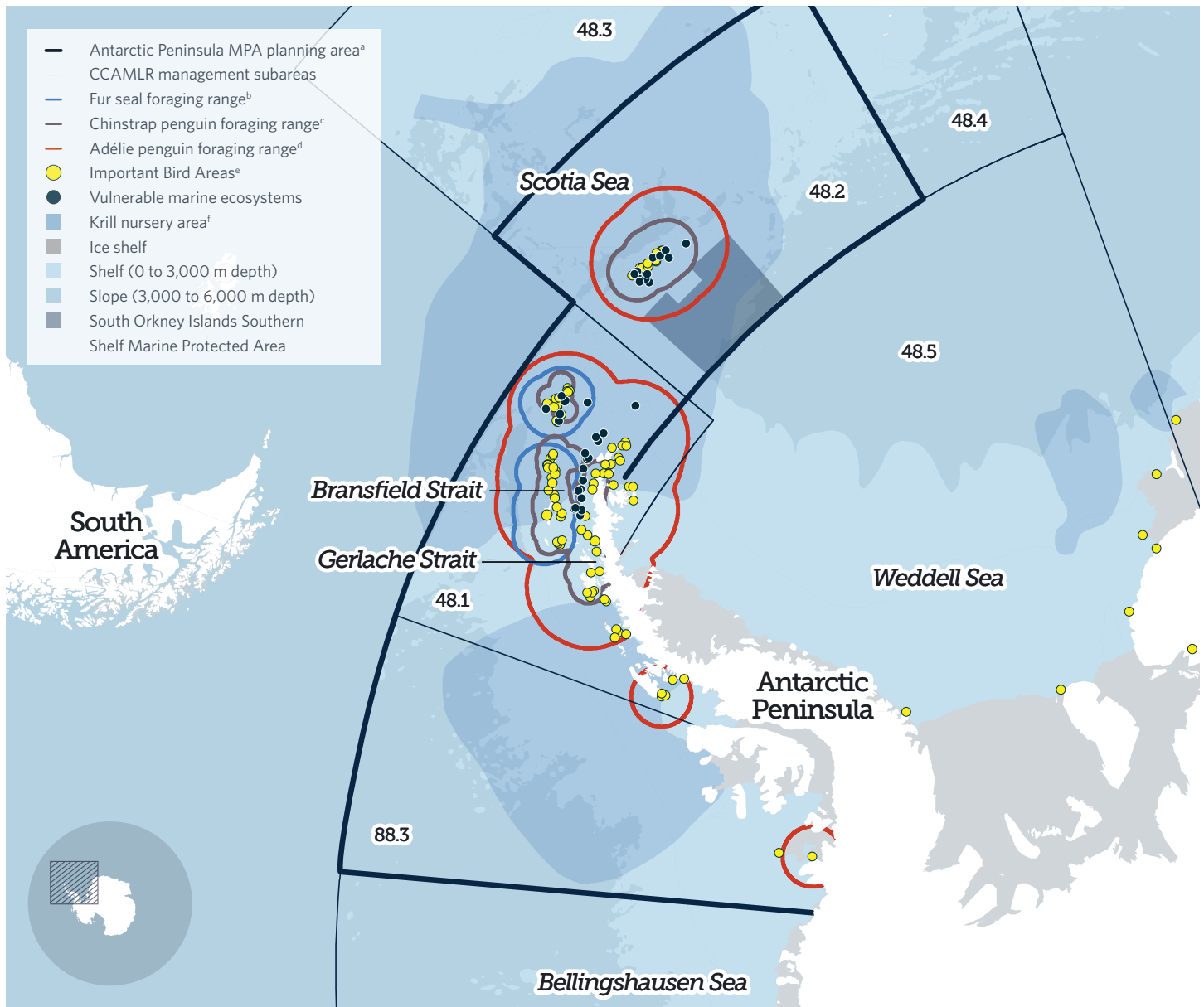




Protection for the Antarctic Peninsula Region

Effort would strengthen ecosystem, boost resilience



Note: In 2009, the Commission for the Conservation of Antarctic Marine Living Resources established its first marine reserve on the South Orkney Islands Southern Shelf in the planning area known as Domain 1. Expanding the Southern Ocean network of marine reserves would protect predator foraging ranges and key krill spawning areas around the rapidly changing Western Antarctic Peninsula.

Sources: ^a Chile and Argentina are working on a proposal that is expected to be submitted as early as October 2017. The outlined area is the full domain area, but the boundaries of the MPA are still unknown. ^b Calculated from maximum foraging distances in K. Barlow et al. 2002. "Are Penguins and Seals in Competition for Antarctic Krill at South Georgia?" *Marine Biology* 140 (2): 205-13. doi:10.1007/s00227-001-0691-7. ^c Calculated from maximum foraging distances in A. Lynnes, et al. 2002. "Conflict or Co-Existence? Foraging Distribution and Competition for Prey between Adélie and Chinstrap Penguins." *Marine Biology* 141 (6): 1165-74. doi:10.1007/s00227-002-0899-1. ^d Calculated from maximum foraging distances in D.A. Ainley et al. 2004. "Geographic Structure of Adélie Penguin Populations: Overlap in Colony-Specific Foraging Areas." *Ecological Monographs* 74 (1): 159-78. ^e C.M. Harris et al., *Important Bird Areas in Antarctica 2014 Summary*, BirdLife International and Environmental Research & Assessment Ltd. ^f Areas with high densities of krill calyptote and furcilia larvae, modified after Figure 2.5, Siegel, Volker, ed. 2016. *Biology and Ecology of Antarctic Krill*. *Advances in Polar Ecology*. Cham: Springer International Publishing. <http://link.springer.com/10.1007/978-3-319-29279-3>

Overview

The Western Antarctic Peninsula and South Scotia Arc regions are some of the most biologically important areas of the Southern Ocean and have experienced the impacts of a changing climate more than almost anywhere else on Earth. Regional warming is leading to changing weather conditions, substantial declines in sea ice formation, and winter habitat loss for wildlife such as Adélie and chinstrap penguins, crabeater seals, and Antarctic krill, a forage species that forms the base of the food web. Combined with concentrated fishing for krill in coastal areas, these changing conditions are putting a strain on this fragile ecosystem and its remarkable biodiversity. Consequently, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) is considering a proposal to establish a large marine protected area (MPA) in this region.

The Pew Charitable Trusts supports establishing permanent large, no-take marine reserves based on scientific evidence that they strengthen ecosystem health, rebuild biodiversity, and boost climate resilience. An MPA in the Western Antarctic Peninsula and South Scotia Arc region should protect biodiversity hot spots, including unique benthic and pelagic habitats, to safeguard Antarctic krill populations, millions of breeding seabirds, marine mammals, and the greater ecosystem.

Recommendations

An MPA for this region must:

- Include year-round no-fishing buffer zones covering the coastal foraging ranges of penguins and other predators of krill, particularly in the Bransfield and Gerlache straits.
- Contain a permanent, large no-fishing zone protecting the entire area near the Bellingshausen Sea and along the Western Antarctic Peninsula, known to be a sensitive spawning and nursery habitat for krill.
- Contain climate change reference areas where no fishing is allowed, to better inform scientists on the impacts of climate change versus the impacts of fishing.
- Fully protect sensitive spawning and nursery habitat for other commercially and ecologically valuable fish species (i.e., icefish, silverfish, and toothfish).
- Incorporate a robust research and monitoring plan that will inform conservation management and the regulation of research and commercial fishing.
- Be permanent to improve ecosystem resilience, given the changing environmental conditions.

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