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Spatially coherent changes in the Antarctic krill stock in the Southwest Atlantic sector of the Southern Ocean.

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Antarctic krill is a key species in the Southwest Atlantic sector of the Southern Ocean. It is an unusually well studied polar zooplankton species with time-series of density and length frequency data spanning multiple decades and 20° latitude. Both datasets indicate significant changes in the krill population since the 1970s, which are linked to changing patterns of atmospheric circulation. Over this period, the krill population has become more scarce, more dominated by larger individuals and increasingly concentrated in the south of the sector. These results suggest a spatially coherent pattern of change across the whole sector which unifies previous, apparently contradictory, findings at smaller scales. Such changes have important implications for a wide suite of nominally krill-dependent predators and krill's role in biogeochemical cycles.

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