



Distribution of Argo profiles for 2000-2006. The dashed line delimits the area under study: from north to south, the core of the OMZ, a transition zone, and the area of ESPIW water.

References

- Chaigneau, A. and O. Pizarro (2005), Surface circulation and fronts of the South Pacific ocean, east of 120°W, *Geophys. Res. Lett.*, 32, 10.1029/2004GL022070.
- McCartney, M. S. (1977). Subantarctic Mode Water. A Voyage of Discovery, supplement to *Deep-Sea Res.*, 103-119.
- Schneider, W., R. Fuenzalida, E. Rodriguez-Rubio, J. Garces-Vargas, and L. Bravo (2003), Characteristics and formation of Eastern South Pacific Intermediate Water, *Geophys. Res. Lett.*, 30 (11), 10.1029/2003GL017086.
- Stramma, L., R. G. Peterson, and M. Tomczak (1995), The South Pacific Current, *J. Phys. Oceanogr.*, 25, 77-91.

HCS075 - Predicting anchovy recruitment in the southern Benguela: comparing rule-based and statistical approaches

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The South African anchovy fishery on anchovy (*Engraulis encrasicolus*) is a recruit fishery, the management of which can benefit from a prediction of recruitment as early as possible into the fishing season. An expert system developed by Miller and Field (2002), designed to predict above median, median, likely below median and highly likely below median recruitment, proved robust to the large changes in abundance observed in 1999/2000. In view of additional recent changes in the distribution of small pelagic fishes in the southern Benguela, we update this expert system with recent input data, and explore its sensitivity to changes in input data series. Finally, we compare the semi-quantitative prediction of the expert system to quantitative prediction of anchovy recruitment using generalised linear and additive models.

Reference

Miller, D.C.M. and Field, J.G. (2002). Predicting anchovy recruitment in the southern Benguela ecosystem: developing an expert system using classification trees. *South African Journal of Science*, 98, 465-472

HCS076 - Physical and biological processes associated to mesoscale structures identified by satellite images in the Humboldt system off northern and central-south Chile

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