

ABSTRACT

Roberts, M.J. (2005)

Dynamics and influences of the Agulhas Current on the east coast shelf and coastal habitats.

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The Agulhas Current is one of the five major western boundary currents on the planet. Its size, velocity and interaction with the shelf bathymetry results in a progression of inshore boundary processes (systems) which deliver either cold, upwelled, nutrient-rich, water to the adjacent inshore shelf, or warm, subtropical, oligotrophic surface water. Such processes also generate inshore current regimes which can either facilitate egg and larval retention or transport them to other (more optimal) regions further down stream. This paper brings together existing knowledge dispersed in the literature with new oceanographic data to define these physical processes and suggests the existence of several oceanographic provinces on the east and south coast of southern Africa. These overlap with many of the observed differing habitats, species distribution and ecosystems.