

## ABSTRACT

ROBERTS, M.J., SAUER, W.H.H. (1994)

**Environment: the key to understanding the South African chokka squid *Loligo Vulgaris Reynaudii* life cycle and fishery?**

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This paper explores effects of environmental variability on the life cycle of the chokka squid, *Loligo vulgaris reynaudii* in South Africa, particularly the effect of physical and chemical influences on adult distribution, and the availability of spawning aggregations to the local jig fishery. The following hypotheses are presented: 1) temperature, dissolved oxygen and currents have a direct effect on the demersal distribution of a adult chokka on the feeding grounds, but this is restricted to the west coast where environmental conditions are more extreme relative to the south coast and, 2) chokka catches increase in proportion to the extent of coastal upwelling, 3) spawning behaviour along the inshore regions (<50m) is strongly influenced by turbidity near the seabed. High turbidity forces the spawning population to lay their eggs in deeper waters, and are thus not available to the jig fishery. 4) El Nino – Southern Oscillation (ENSO) events are linked with large fluctuations in the availability of spawning squid aggregations to the inshore jig fishery.