

ABSTRACT

J. Taunton-Clark (1993)

Coastal Sea Temperature variability between Port Nolloth and St Francis Bay.

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Previous research examining the medium to long term variability of the physical environmental around the South African coast has been limited by the dearth of suitable environmental time series. This problem was debated at a workshop in 1990 where it was decided that improved monitoring of the marine environment was important. The SFRI has been monitoring sea temperatures as simple and reliable indicators of physical variability at 12 coastal locations since early 1991. These locations range from Port Nolloth in the north west to St Francis Bay on the south coast and depths vary from three meters to thirty meters.

The paper describes the characteristics of the temperature variability at each site and investigates the relevant physical forcing mechanisms, which may be responsible. Time scales from a few hours to seasonal are analysed and, although the data series are only about two years long, some indication of inter-annual variability is gained. These data are being included in various studies for fishery resource variability with the aim of improving knowledge of the possible environmental modulation of stocks and recruitment. The data will also be used in conjunction with those collected by the South African Weather Bureau observers to aid a classification of the coastal environment into "climate zones" which may be of use to the growing requests for information on the near-shore environment from aqua culturists and tourism organizations.