

Upwelling Formation of Warm core eddies and its impact on biological life

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Meso zooplankton samples collected from the Bay of Bengal on 9th July 2003 (Summer Monsoon) showed a high biomass ($2564 \text{ m}^3/1000\text{m}^3$) at subsurface level in the open ocean region of $15^\circ 30' - 17^\circ 30' \text{ N}$. The primary productivity values of this region remained low ($73.55 \text{ mgCm}^{-2}\text{d}^{-1}$) and the chlorophyll (4.6 mgm^{-2}) also showed an equivalent drift. Correlating the physical and chemical parameters illustrated the presence of warm core eddy in the same region. Temperature and salinity data collected identified a warm core in the open ocean region of $15^\circ 30' - 17^\circ 30' \text{ N}$ at a depth of 50 -250m. The eddy is characterised by high temperature at its core with an inversion of about 4° C and salinity (-0.12). The eddy breaks into two, with both the core having similar characteristics as of mother core. The eddy was found to spread up to a depth of 200-250 m and from thereon gets mixed up. Is this seasonal occurrence of eddy can fuel the secondary production in Bay of Bengal?