

UPPER WATERS NORTH OF NEW GUINEA IN 1971 (Abstract)

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Two cruises have been carried out by O.R.S.T.O.M. Oceanographic Division of Noumea (New Caledonia), aboard R.V. CORIOLIS, to study the equatorial area north of New Guinea, in relation with meteorological situation : "FOC 1" (January-february 1971) during the NW Monsoon, and "FOC 2" (June-july 1971) during the SE trade winds. Hydrological conditions are quite different during these two periods according to the wind systems.

The NW Monsoon generates an eastward surface circulation, specially along the coast when an induced upwelling gives rise to high fertility. On the other hand, during the SE trade winds, the general motion is westward for surface waters; yet the Equatorial North Counter-Current is strengthened.

In subsurface, westward spreading of "South Pacific subtropical surface water", characterized by its maximum salinity core and low oxygen content, along with feeding of Cromwell Current with Coral Sea water, are best evidenced during "FOC 2".

From both cruises it appears that fertility along the north coast of New Guinea and in Bismark Sea is higher than what is encountered offshore.

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