

RESIDUES OF ORGANOCHLORINE PESTICIDES IN LAKE MARIUT

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Lake Mariut, a brackish water lake adjoining the Mediterranean Coast of Egypt, has suffered much from intensive pollution in recent years due to the successive increase of human population and industry around it (Saad, 1980). The occurrence and distribution of organochlorine pesticides in the water of Lake Mariut during a period of one year were studied. This study represents an essential part of a pilot project on pollution of Lake Mariut supported by IAEA. The major organochlorine pesticides detected in the water of Lake Mariut were Lindane, p, p'-DDE, o,p'-DDT and p, p'-DDT. The mean concentrations of these pesticides were 2.091, 4.493, 0.009 and 0.134 ppb, respectively. The mean concentration of the calculated total DDT (Σ DDT) was 5.1 ppb.

Lindane and p, p'-DDE were detected in all months of the study period. However, p, p'-DDT was detected only in four months and o,p'-DDT in one month. Higher concentrations of p,p'-DDE, consequently, Σ DDT were obtained in January, February and March 1979 (Figure 1).

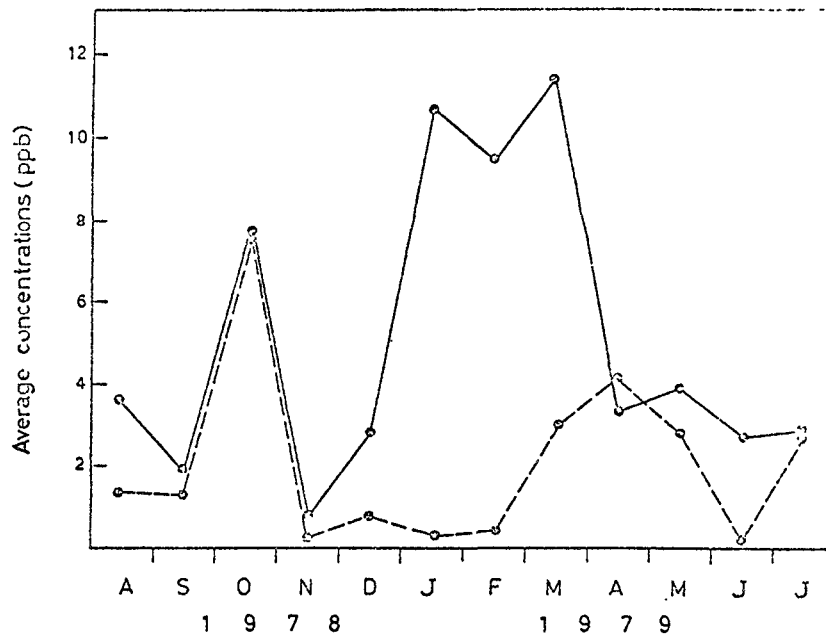


Figure 1 - Seasonal variations of the average concentrations of Σ DDT (solid line) and lindane (dotted line) in the water of Lake Mariut during 1978 - 1979.

The higher mean concentrations of p,p'-DDE and DDT found in stations in the southern part of Lake Mariut are attributed to the direct effect of the drainage waters from Umum and Qala drains entering into the lake.

REFERENCE:

SAAD, M.A.H. 1980. Eutrophication of Lake Mariut, a heavily polluted lake in Egypt. Panel Proceedings Series, IAEA, Vienna, STI/PUB/548, 153-163.