Lake Manzalah is the largest of the four Delta lakes, with a surface area of about 390 km². The lake was connected to the River Nile (Fig. 1) by the fresh water Eniyya and Katame canals. It has south western connections to the sea and sewage water flows into the south east basin (El Bakar canal) as well as into the south and west south west basins (Ramos and Hadous drains).

The average CaCO₃ content is 14.25%, while the average organic matter content is 5.2% lower than that found by SABROUTI, M. and DEGHADY, E. (1989) for lake Mariut (average 14.1%). The organic matter, organic nitrogen and total phosphorus have been determined in the sediments of Lake Manzalah, Egypt.

By comparing the present results with those of Port Fouad (EL SABROUTI et al., 1989) and Bardawil (LEVY, 1974) lagoons we found that the difference in hydrographic conditions affected greatly the type and distribution of the sediments in all three areas. The coarse fractions occurring in the lagoonic phases were covered with sandy areas and the fine fractions with silty clayey areas.

The sand fraction spreading along the northern and north eastern sides is mainly derived from the Mediterranean beach sand penetrating through the lake/nile connection (Elsoufiura canal and El Camil opening) as well as wind blown sand. Such distribution of sediment type reflects the hydrographical changes and the total absence of Nile sediment load - which previously used to enter the lake - after the construction of Asswan High Dam.

The present study aims to study the levels of organic, inorganic and total phosphorus in the sediments of Alexandria region. Subsequently, the amount of buried phosphorus will be quantified.

It has been found that the Nile sediments are the silty sand type (zones 6 and 7) followed by the abundance of the complex type sand-silt-clay (zone 5) and clayey type (zone 1) respectively (Fig. 1). The sand fraction spreading along the northern and north eastern sides is mainly derived from the Mediterranean beach sand penetrating through the lake/nile connection (Elsoufiura canal and El Camil opening) as well as wind blown sand. Such distribution of sediment type reflects the hydrographical changes and the total absence of Nile sediment load - which previously used to enter the lake - after the construction of Asswan High Dam.

Organic matter content in Lake Manzalah sediments is the silt type dominating in the sediments. Being highly found in the zones of silt and clay and lower in sandy areas. The organic matter, organic nitrogen and total phosphorus have been determined in the sediments of Lake Manzalah, Egypt. By comparing the present results with those of Port Fouad (EL SABROUTI, M., SAAD, M., NAWAR, A. and DEGHADY, E., 1989) for lake Mariut, Egypt. It has been found that the difference in hydrographic conditions affected greatly the type and distribution of the sediments in all three areas. The coarse fractions occurring in the lagoonic phases were covered with sandy areas and the fine fractions with silty clayey areas.

The sand fraction spreading along the northern and north eastern sides is mainly derived from the Mediterranean beach sand penetrating through the lake/nile connection (Elsoufiura canal and El Camil opening) as well as wind blown sand. Such distribution of sediment type reflects the hydrographical changes and the total absence of Nile sediment load - which previously used to enter the lake - after the construction of Asswan High Dam.

The present study aims to study the levels of organic, inorganic and total phosphorus in the sediments of Alexandria region. Subsequently, the amount of buried phosphorus will be quantified.

Phosphorus is one of the nutrients limiting growth in natural waters. Contrary to the open ocean, phosphorus cycling in estuarine and coastal areas is influenced by river input in both dissolved and particulate form, contributions of sewage and the intensive coastal water masses with the underlying sediments. Thus, phosphorus in shallow sea areas is subject to both biological and physicochemical controls (BALZER, 1986). Phosphorus in the sediment may be found in pure water adsorbed to particles, bound to calcium, chemisorbed by iron oxides and hydroxides, and contained in organic (BERNHARD, 1981; BLAZER, 1986). MIYEREK (1982) estimated that phosphate content of river waters already has been increased globally by a factor of three; the additional load, however, is distributed unevenly over the world and may reach a multiple of this factor in highly polluted areas.

The present study aims to study the levels of organic, inorganic and total phosphorus in the sediments of Alexandria region. Subsequently, the amount of buried phosphorus will be quantified.

By comparing the present results with those of Port Fouad (EL SABROUTI et al., 1989) and Bardawil (LEVY, 1974) lagoons we found that the difference in hydrographic conditions affected greatly the type and distribution of the sediments in all three areas. The coarse fractions occurring in the lagoonic phases were covered with sandy areas and the fine fractions with silty clayey areas.

The sand fraction spreading along the northern and north eastern sides is mainly derived from the Mediterranean beach sand penetrating through the lake/nile connection (Elsoufiura canal and El Camil opening) as well as wind blown sand. Such distribution of sediment type reflects the hydrographical changes and the total absence of Nile sediment load - which previously used to enter the lake - after the construction of Asswan High Dam.

The present study aims to study the levels of organic, inorganic and total phosphorus in the sediments of Alexandria region. Subsequently, the amount of buried phosphorus will be quantified.

It has been found that the Nile sediments are the silty sand type (zones 6 and 7) followed by the abundance of the complex type sand-silt-clay (zone 5) and clayey type (zone 1) respectively (Fig. 1). The sand fraction spreading along the northern and north eastern sides is mainly derived from the Mediterranean beach sand penetrating through the lake/nile connection (Elsoufiura canal and El Camil opening) as well as wind blown sand. Such distribution of sediment type reflects the hydrographical changes and the total absence of Nile sediment load - which previously used to enter the lake - after the construction of Asswan High Dam.

REFERENCES


Fig. 1: Area of study and location of samples.

1 = Abu Qir 264 m (AC)
2 = Sheikh Zayed 260 m (MIC)
3 and 4 = Sidi Kinir 10 and 20 m (1987)
5 = Marakat/Burg of Arab 10 m
6 and 7 = Marakat 10 and 20 m (1987)

Fig. 2: Concentrations of Inorganic Phosphorus and Organic Phosphorus in stations sampled.

1 = Abu Qir 264 m (AC)
2 = Sheikh Zayed 260 m (MIC)
3 and 4 = Sidi Kinir 10 and 20 m (1987)
5 = Marakat/Burg of Arab 10 m
6 and 7 = Marakat 10 and 20 m (1987)