# Effect of Excessive Aquatic weeds in Egyptian Lake

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**Abstract:** Approximately, two- third of earth's surface is water, so water would seem to be inexhaustible. Yet conservation of water represents a national problem that will become even greater than the need to conserve. If we have to protect and utilize our water resources fully, sound management is required. Today water must be intensively utilized to meet agricultural/commercial and recreational requirements. In Irrigation and drainage systems are semi-natural ecosystems. They are subject to change by nature. One of the actions of the nature being results is the development of aquatic weeds.

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## Introduction:

In irrigation systems, excessive growth of aquatic weeds usually causes serious problems. By choking the waterways, they hamper the water flow and thereby increase silting up of irrigation canals. They are not only preventing irrigation water from teaching end of canals, but also a considerable amount of water is lost by evapotranspiration by aquatic plants. Moreover, aquatic weeds provide a suitable habitat for vectors of various human diseases, like Bilharzia or malaria.

The total eradication of aquatic weeds is not desirable as the presence of some limited plants has certainly advantages. Bank plants will support the banks with their roots, and their removal will expose the banks to increased erosion.

Therefore, the aim of aquatic weed control is to keep aquatic vegetation at an acceptable low level with a minimum cost. For this purpose, different methods are available, manual, mechanical, and biological or combinations of them.

### Classification of Weeds

Aquatic weeds are classified into groups according to their life form. There are three main life foams related to the plants position with respect to the water surface.

- Floating plants: Floating plants have leaves floating on/or slightly emergent above the water surface. They may not be rooted in bottom.

- Submergent plants: Submergent plants grow mostly below water-surface. They may or may not be rooted in the soil.

- Emergent plants: Emergent plants are rooted in the soil and have their leaves above the water-surface.

Aquatic plants provide both habitat and food for vectors of human diseases such as malaria and schistosomiasis (bilharziasis). Bilharziasis is one of the most critical health problems of the tropics at present time. Their snails live in the microhabitats provided by aquatic vegetation in which they find both shelter and food. has shown that in Egypt the bilharzias snails prefer *potamogetoncrispus* followed *by Eichhorniacrassipes*, and then *panicumrepens.*

### Status of aquatic weeds n Egypt

In Egypt, some of the problems arising from the construction of Aswan High Dam (AHD) involve the waterway environment as a result of the consequent regulated flows. Constructing AHD across the Nile at Aswan is obviously has some effect on the aquatic macrophyte. It provided routes for some aquatic weed species to the system where they had been previously absent, or they caused permanent elimination for some of them within Lake Nasser, Aswan reservoir, Nile River and waterways (canals and drains).

### State of aquatic within Lake Nasser

In 1966-1968 (subsequent to the construction of AHD), two euhydrophyte species were lost from the region (Alismagramineum, Damosoniumalisma). On the other hand, the other four species have colonized the lake with varying degrees of success. Furthermore, six new species were recorded for the first time within the Lake (Vallisneriaspralis, Potamagetonschweinfurthii, Najashorrida, Najas marina, Subsp. Armata and Nitellahyalina).

In Lake Nasser there is an annual cycle of water level changes according to the seasonal flood pattern of the River Nile. The flood occurs in late summer-early autumn. Alteration of the hydrology of the River Nile system has caused dramatic changes in macrophyte community structure.

The water body regulation has selected submerged weeds tolerating the fluctuating, water level. The water level fluctuation might often cause mortality of the aquatic weeds. During the drought period, continuous low water level has exposed the littoral shallow water habitats resulting in desiccation of the submerged weeds. Following this period, continuous high water level has .caused low light condition for the same area, as a result some aquatic submerged weeds not tolerating the dark condition might die. Furthermore, after constructing AHD, the new littoral zone of Lake Nasser was mainly sand substrate because it was previously dessert. With continuous flooding, the suspended silt was accumulated behind the Darn creating new hydrosoil texture (sandy clay loam). This type of soil provided a favorable substrate for growing the submerged weeds like Myriophllumspicatum. Moreover, the accumulated silt washed from the banks and precipitated in the main canal leaving behind sand or loamy sandy banks.

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