MEDCOAST 99 – EMECS 99 Joint Conference, Land-Ocean Interactions: Managing Coastal Ecosystems
9 – 13 November 1999; Antalya, Turkey, E. Özhan (Editor)

Empirical Approach to Renovate a Seawater Intrusion Network

A. Melloul[(1)] and S. Aberbach[(2)]

[(1)]Hydrological Service, P.O. Box 6381, IL-91 063 Jerusalem, Israel
Tel +972-2-5388702 Fax +972-2-5388704 e-mail: avimel@vms.huji.ac.il
[(2)]Tahal Consulting Engineers LTD. P.O.B. 1170 Tel-Aviv

Abstract

This paper proposes an empirical formula for assessing better understanding and control of coastal aquifers, especially regarding their interface with the sea. The approach delineates areas having highest priority, in which urgent measures are required for renovation of the seawater monitoring network. Two types of data are necessary for this. The first is the hydrological situation in the aquifer, the second, the technical condition of existing observation well networks and their ambient groundwater quality environment. This approach, applied to Israel's Coastal aquifer indicates that the majority of the highest priority areas are located in the northern portion of the aquifer. These are areas where drilling new observation wells and improvement of technical conditions of the seawater intrusion observation well network are highly recommended. In light of the results obtained, the approach may also be used as a tool enabling improvement in the quality of information for each area, and focusing upon those locations requiring an improved seawater intrusion monitoring network to provide this information.