

**FIELD STUDIES OF NITRATE MASS TRANSFER IN THE COASTAL
AQUIFER OF CORINTH, GREECE**

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ABSTRACT

The present study is focused on the groundwater flow and nitrate mass transport in the coastal aquifer system of Corinth. In the past few decades nitrates and their byproducts have received special attention due to their impact on human health. The increased use of fertilizers for agricultural purposes has become a significant source of contamination to groundwater bodies. In most of the cases it is difficult to determine the sources of contamination as well as the perimeter of the contaminant plume. The present work consists of a) the selection of geological, hydrological and nitrate (NO₃) contaminant concentrations data for the aforementioned aquifer b) the analysis of the data. The main objective of this study is to define the nitrate contaminant plume using field observation data (measurements) and to correlate these data with the measurements of the hydraulic heads. In addition, the goal is to determine the main sources of contamination and define how these are affected and propose an optimal remediation scheme.