Introduction to Studies of Coastal Aquifers of Israel

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This chapter deals with several aspects of coastal aquifers, including methods of monitoring (levels and salinities) and processes that determine the chemical and isotopic composition of groundwater. The chapter describes the interrelation between the sea and the aquifer, mostly in the direction from the sea toward the land.

This part is divided to several chapters according to several relevant topics. Chapter “[General Information and Hydrogeology of the Mediterranean and Dead Sea Coastal Aquifers and Their Relation with Their Base Level](#)” deals with the general information and hydrogeology of the Mediterranean and Dead Sea coastal aquifers. This sub-chapter also deals with several methods of monitoring of the variation in salinity of the aquifer from different sources, mainly regarding seawater intrusion. Chapter “[Dynamic Relationship Between the Sea and the Aquifer](#)” deals with the dynamics relation between these two coastal aquifers and the sea. Chapter “[Geochemical Aspects of Seawater Intrusion into the Mediterranean Coastal Aquifer](#)” deals with the geochemical evidences for seawater intrusion into the Mediterranean coastal aquifer and the process that occurs within the fresh–saline water interface zone. Chapter “[Geochemical Aspects of Groundwater in the Dead Sea Coastal Aquifer](#)” deals with the geochemical processes in the Dead Sea coastal aquifer and their significance with regard to the groundwater flow regime and velocity. Chapter “[Submarine Groundwater Discharge Along the Israeli Eastern Mediterranean Coast and in Inland Basins](#)” deals with the component of submarine groundwater discharge (SGD) to the sea.

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