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CHEMICAL AND ISOTOPIC COMPOSITION OF WATER FROM SPRINGS AND WELLS IN THE DAMOUR RIVER BASIN AND THE COASTAL PLAIN IN LEBANON

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ABSTRACT
A hydrochemical and isotopic study was carried out on spring waters of the Damour River Basin and groundwaters from wells in the coastal Mediterranean plain in Lebanon. The aim of this study was to determine the origin, the age, and the quality of groundwater resources in the limestone aquifer. The results showed that most of the groundwater pumped from wells for irrigation and drinking water supply is directly recharged in the coastal plain. It contains up to 30 percent of groundwater recharged in the high mountains. The elevated solute content of the groundwater in the coastal plain compared to that of the spring waters is due to different intensive agricultural activities rather than seawater intrusion. The relatively long mean residence time of the spring waters of about ten years contradicts the previous hydrogeological assumption that the low magnesium/calcium ratio is due to the fact that hydrochemical equilibrium has not been established.

Reference: *Saad, Z., V.A. Kazpard, M.A. Geyh and K. Slim; Chemical and Isotopic Composition of Water from Springs and Wells in the Damour River Basin and the Coastal Plain in Lebanon, Journal of Environmental Hydrology, Vol. 12, Paper 18, October 2004.*

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