Flash flood–producing rainstorms over the Dead Sea:A review

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The Dead Sea, located along the boundary separating semiarid climate from arid climate, is prone to flash flooding caused mainly by severe convection generating heavy precipitation. An overview of the main responsible synoptic systems (tropical and extra-tropical) accounting for most of the major flash floods is presented. The moisture for developing intensive convection over the region can be originated not only from the adjacent Mediterranean Sea but also from distant upwind sources. Under tropical air mass intrusions, convection generated by static instability seems to play a more important role than synoptic-scale vertical motions. The essential subsynoptic scale processes leading to deep convection and the resulting spatio-temporal rainfall characteristics are discussed through examples of selected storms previously analyzed.