Geophysical Research Abstracts, Vol. 9, 04896, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-04896

Overview of the human-induced geological hazards encountered along the Dead Sea coast

D. Closson (1), N. Abou Karaki (2)

(1) Royal Military Academy, Signal and Image Centre, Brussels, Belgium (dclosson@rma.ac.be), (2) University of Jordan, Environmental & Applied Geology Dept., Amman, Jordan (naja@ju.edu.jo)

The Dead Sea is a terminal lake shared by the Jordanian, the Israeli and the Palestinian Authorities. Its level is currently dropping at a rate of about one meter per year due to the overexploitation of the whole tributaries. The lowering started around four decades ago but geological hazards appeared more and more frequently from the end of the eighties. The water level lowering is matched by a parallel groundwater level drop, which results in an increasing intensity of water flow. The diagonal interface between of the Dead Sea brine and the fresh groundwater is pushed downwards and seawards. Nowadays, sinkholes, subsidence, landslides and reactivated salt-karsts affect severely wide coastal segments. Until now, mainly infrastructures were damaged and few people/animals injured but the ongoing development of tourism in this very attractive place will increase the potentiality of serious incidents if precautions are not taken into account in the development plans.

This paper discusses the main observations taken all around the Dead Sea and shed a light on the differences between the geological hazards of the Western shore (Israel, Palestinian Authority) and the Eastern shore (Jordan). It is the first attempt to bring an overview of the human-induced geological hazards encountered along the Dead Sea coast.