# TABLE OF CONTENTS

The Dead Sea Subsidence and Sinkhole Disasters, over Two Decades of Monitoring and Studies. It is Time for an Early Warning System Now! ................................................................. 1

N. Karaki, D. Closson

Very High Resolution Ground Displacement Mapping and Monitoring over the Lisan Peninsula: Preliminary Results .......................................................... 5

P. Pasquali, P. Riccardi, N. Karaki, D. Closson, F. Holecz

Ghor Al Haditha Sinkholes Database and Tectonic Interpretation ........................................ 8

M. Idrissa, D. Closson, N. Karaki

Geophysical Investigations of Ghor Haditha Sinkholes, Jordan ........................................ 12

H. Alrshdan

Origin of Unusual Dolines (Sinkholes) in Maqarin Area, North Jordan ................................ 17

H. Khoury, E. Salameh

Sinkholes Related to Tectonic Factor at Ghor Al Haditha Area, Dead Sea, Jordan .......... 22

A. Diabat

Geophysical Assessment of Sinkhole Hazard Evaluation at Ghor Haditha (Dead Sea, Jordan) ......................................................................................... 23

C. Camerlynck, A. Abueladah, R. Al-Ruzzouq, A. Al-Zoubi, M. Boucher, L. Bodet, A. Dhemaitied, P. Galibert

Detecting the Sink-holes by Microgravity Data ................................................................. 25

V. Ardestani

Active Multichannel Seismic Surface Wave Method for Subsurface Cavity Detection ........ 27

A. Al-Bis, E. Sharif, M. Harb

The Contribution of Airborne EM for the Study of Dead Sea ........................................... 29

A. Menghini, A. Viezzoli

Design of an Airborne EM Survey Over the Dead Sea ....................................................... 34

T. Asch, B. Smith

Sinkholes Detection by AEM Method: A Case Study from Yucatan, Mexico ...................... 39

A. Menghini, Y. Ley-Cooper, A. Viezzoli

Karst Dynamics Revealed by Small Baseline Subset Interferometric Technique ................ 44

D. Closson, N. Karaki, P. Pasquali, P. Riccardi, F. Holecz

SARscape®, a Commercial-Off-The-Shelf Software Package for the Measurement, Monitoring and Modeling of Geophysical Phenomena ........................................ 50

P. Pasquali, S. Atzori, A. Cantone, P. Riccardi, M. Filippi, M. Barbieri

Retreat of the Dead Sea and its Implications on the Surrounding Groundwater and on the Stability of Coastal Deposits ......................................................... 51

E. Salameh

Transboundary Water Governance and Climate Change: Focus on Dead Sea, Jordan ........ 55


Vision and Politics of Water in the Middle East: Challenges Facing Jordan River and Dead Sea .................................................................................................. 58

O. Mohawsh, M. Batarseh

Relocation Processing of Selected Earthquakes in the Gulf of Aqaba Region ..................... 60

A. Ghannam

Decision Support System for Water Resources Management - Optimization of Groundwater Resources Management ................................................................. 64


“Rock Noise” Monitoring System Aimed to Control of Carrel Hut Basement on Mt Cervino/Matterhorn ................................................................. 67

S. Priano

Diagnosis of Problematic Underground Conditions by Geophysical Techniques ................ 72

F. Hamdi

The Sudden Subsidence (Sinkhole) in Musafah Highway, Abu Dhabi, Associated with Localized Collapse of Subsurface Cavity During Micro – Tunnelling ......................... 77

M. Hassounah

Author Index