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# **Geoheritage, Geoparks and Geotourism**

## **Conservation and Management Series**

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Spectacular geo-morphological landscapes and regions with special geological features or mining sites are becoming increasingly recognized as critical areas to protect and conserve for the unique geoscientific aspects they represent and as places to enjoy and learn about the science and history of our planet. More and more national and international stakeholders are engaged in projects related to “Geoheritage”, “Geo-conservation”, “Geoparks” and “Geotourism”; and are positively influencing the general perception of modern Earth Sciences. Most notably, “Geoparks” have proven to be excellent tools to educate the public about Earth Sciences; and they are also important areas for recreation and significant sustainable economic development through geotourism. In order to develop further the understanding of Earth Sciences in general and to elucidate the importance of Earth Sciences for Society, the “Geoheritage, Geoparks and Geotourism Conservation and Management Series” has been launched together with its sister “GeoGuides” series. Projects developed in partnership with UNESCO, World Heritage and Global Geoparks Networks, IUGS and IGU, as well as with the ‘Earth Science Matters’ Foundation will be considered for publication. This series aims to provide a place for in-depth presentations of developmental and management issues related to Geoheritage and Geotourism in existing and potential Geoparks. Individually authored monographs as well as edited volumes and conference proceedings are welcome; and this book series is considered to be complementary to the Springer-Journal “Geoheritage”.

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Mamoon Allan • Ross Dowling  
Editors

# Geotourism in the Middle East

 Springer

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Wadi Numeira, near the Dead Sea in Jordan. The second image: The editors in Wadi Rum, Southern Jordan. Egypt, White Desert rock formations: Matyas Rehak/shutterstock.com Turkey, Pamukale pools and terraces: Andre Chet/shutterstock.com Oman, Bimmah sinkhole: Yoshida/shutterstock.com

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*This book is dedicated to Reida Al-Magharieh*

*“Mother, you left us beautiful memories, your love is still our guide, although we cannot see you, you’re always at our side”—Unknown*

*This is the first book I have completed since my mother’s passing in August 2020. I gratefully dedicate this book to the memory of my beloved and deeply missed mother (1938–2020). Her support, care, and love were constantly the base for any achievement I made in my life. During her life, she taught me as the Arabic proverb said, “Determination is the key to everything.”*

*I will forever remember all you did for me, my mother.*

*Mamoon Allan*



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## Preface

Tourism has taken a toll over the past 2–3 years due to COVID-19 and the ensuing Global Pandemic.

In 2019, there were 1.3 billion international tourists but in 2021, that was reduced to 415 million (UN World Tourism Organization, 2022). Whilst experiencing a 4% increase over the previous year (2020, the worst year on record), international tourist arrivals were still 72% below the pre-pandemic year of 2019.

In the Middle East, arrivals declined by 24% compared to 2020 and 79% over 2019. However, according to the latest UNWTO Panel of Experts, most tourism professionals (61%) see better prospects for 2022. New research from the World Travel and Tourism Council (WTTC) has revealed the Travel & Tourism sector in the Middle East could reach US\$246 billion this year, just 8.9% behind pre-pandemic levels (HospitalityNet 2022). Research from the WTTC shows that as the region continues to recover from the pandemic, with major markets reopening borders and easing restrictions to travel, the sector's contribution to employment could almost reach pre-pandemic levels this year. Further attention to tourism development in the Middle East will occur with the World Travel and Tourism Council's *Global Summit* taking place in Riyadh, Saudi Arabia, 28 November—1 December 2022.

With an increase in international tourism expected in the Middle East, it will be important for destinations to protect their geological, biological, and cultural diversities by building resilience and becoming more sustainable. For example, Ras Al Khaimah, in the United Arab Emirates, aims to become the first certified sustainable tourism destination in the Middle East (WTTC 2022). One of their goals is for local community development by encouraging businesses to consume locally produced goods, respecting local culture and heritage, and local job creation. Geotourism with its holistic approach of fostering economic, social, and environmental benefits is an obvious vehicle to deliver this goal, and it can do that in a myriad of locations across the Middle East.

However, geotourism is not well known or practiced in the Middle East, so the intention of this book is to provide an understanding of what geotourism is, and how it is being approached in some countries within the Region. For a more comprehensive compendium on geotourism, we recommend the *Handbook of Geotourism* (Dowling and Newsome 2018).

Thus, this book is a research text that has been written for practitioners, educators, and students alike. Geotourism is not geological tourism but rather an approach to tourism which starts with geology to understand a destination's sense of place. Thus, geotourism is viewed here as more 'geographical' than 'geological' in nature by encompassing an 'ABC' approach to understanding the world in which we live. This comprises the Abiotic (geology and climate), Biotic (plants and animals), and Cultural (past and present) aspects of the environment. The abiotic elements shape the biotic elements and together, both shape the cultural environment, that is, the way in which people have lived and continue to live in their setting. This is the power of geotourism which is a vehicle for fostering sustainable development for local communities as well as providing an integrated understanding of a destination and its people for visitors and tourists.

This book includes contributions from many sources and authors for whom English is not their first language. In addition, geotourism is relatively new in the Middle East and is often understood as being geological or environmental tourism. Thus, some contributions reflect these biases. In addition, the writing styles vary somewhat and while we have done our best to edit these contributions, we hope you appreciate what these authors have to say, applaud their enthusiasm and hard work, and value their insights into geotourism.

Accordingly, we want this book to serve three functions:

1. Provide a clear understanding of what geotourism is
2. Profile a range of country case studies from the Middle East
3. Be a resource for students and practitioners.

We hope you enjoy the read as much as we did in its compilation.

Amman, Jordan  
Perth, Australia  
August 2022

Mamoon Allan  
Ross Dowling

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## Acknowledgements

The two editors would like to thank each other for a productive relationship spanning two decades. We have worked well together over the years, having co-authored a number of academic papers and book chapters on geotourism. The experience of co-editing this book has been extremely productive and very enjoyable. We wish to acknowledge the support of our employers: the University of Jordan, the oldest and leading University in Jordan, and Edith Cowan University, one of Australia's leading new-generation universities. Both our universities are committed to excellence in research, teaching, and community engagement.

No book is written in isolation, in fact most require the efforts of a wide range of people including the support of family and friends, the contributions and encouragement of colleagues, and of course the professional skills of those who are directly involved in its publication and subsequent promotion. This book is no exception, and we wish to thank a number of people for their personal and/or professional support throughout the process.

First, we would like to thank all of the 21 contributors. Some we have known for many years and have worked with before; others were unknown to us before this project. Some are emerging, new, or young researchers, whereas others are leading academics having global impact in their fields. We have got to know all better through the many iterations of the text during the evolution of the book, and we salute each and every one of you for having the faith in this project and the fortitude to deal with our many demands over a long period of time. This book is yours, and we know that it has been immeasurably enriched by your contributions.

We also wish to acknowledge the enthusiasm and support of the publishers, Springer Nature Switzerland. They are a leading publisher of science and nature and are well known for their book series *Geoheritage, Geoparks and Geotourism* (<https://www.springer.com/series/11639>). The series aims to provide a place for in-depth presentations of developmental and management issues related to geoheritage and geotourism in existing and potential geoparks.

They are also the publishers of the journal *Geoheritage* (<https://www.springer.com/journal/12371>) which details all aspects of our global geoheritage. It examines conservation of sites and materials—use, protection, and practical heritage management, as well as its interpretation through education, training, and tourism.

We specifically want to thank Doris Bleier, Publishing Editor of Geography and Sustainability Research, and Jayanthi Krishnamoorthi, Project Coordinator—Total Service Books Production, for their encouragement throughout the preparation of this book. They were very professional to work with.

Individually as editors, we wish to thank the following people.

**Mamoon Allan** would like to thank his friends of professional geotourism researchers and experts from around the world. I also wish to thank my colleagues at Edith Cowan University, Western Australia, and at Faculty of Economics—Universitas Negeri Jakarta, Indonesia, as I shared with them several geotourism papers and research. I wish to thank my colleagues, and friends at the University of Jordan and Yarmouk University for their support and encouragement. I have had the opportunity to teach in Libya, Australia, and Jordan, thus, I would like to thank all my students from different countries, and it was really an enjoyable and rich



teaching experience in these different countries. Also, I would like to thank all of my relatives and friends in my hometown, AL-Husn, northern Jordan. Furthermore, I would like to express my deepest thanks to my beloved brothers, sisters, and my wife, for their continuous support, encouragement, and care. Finally, greatest thanks to my son Reda whose birth coincided with the start of work on this book. I wish he will enjoy reading this book in the future.

**Ross Dowling** would like to thank my many Australian and international students from around the world, particularly the Middle East, who have participated in my Geotourism classes since 2008. We have had a lot of fun, and I have learned a lot about the industry from your research assignments and oral presentations. Thanks also to other geotourism professionals Dr. Alan Briggs (Chair, Geoparks Western Australia), Dr. Young Ng, (Principal Geoscientist, Danxi-ashan UNESCO Global Geopark, China), Prof. Rannveig Ólafsdóttir (University of Iceland), Dr. Martina Pásková (Ministry of Environment, Czech Republic), Prof. Ibrahim Komoo (Malaysia), and Nick Powe (Kent's Cavern, UK). I also wish to thank my colleagues on the Australian and International Advisory Boards of the Australian Geoparks Network (<https://australiangeoparksnetwork.org>). Together we are fostering the establishment of geoparks, geotourism, and geotrails in Australia.

Finally, I wish to thank my wife Wendy for her unfailing love and support through my 18th book in the last 30 years. I could not have achieved this without her. I also wish to thank my six children and eleven grandchildren for the contributions they have made, and continue to make, to my life. They are my son Tobias and HyeHyang Dowling, and grandson Joshua (Jeju Island, South Korea); daughter Aurora and Mike Gibbs, and granddaughters Helena and Nina; son Frank and Kate Dowling, and grandson William (Christchurch, New Zealand); daughter Jayne and Trevor Belstead, and granddaughters Shenee and Paige (London, England); son Simon and Lynette MacLennan, and grandchildren Amelie, Ewan, and Elsie (Melbourne, Australia); and son Mark and Jess Dowling, and their children Nessa and Zavier (Perth, Australia). This book is part of my legacy for you all.

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### About the Editors



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**Ross Dowling AM** is Emeritus Professor of Tourism in the School of Business & Law, Edith Cowan University, Western Australia. He has a B.Sc. (Geology), M.Sc. [Hons] (Geography), and Ph.D. (Environmental Science). Professor Dowling conducts international research in the fields of geotourism, ecotourism, and cruise ship tourism and has over 200 publications in these fields including sixteen books. He has deep interest in the development of Geotourism and Geoparks, and he is a passionate advocate for the establishment of UNESCO's Global Geoparks in Australia and around the world. He is the Foundation Chair of the Australian Geoparks Network. He fosters regional development through Geotourism globally, and he convened the world's first three conferences on Geotourism in Australia (2008), Malaysia (2010), and the Sultanate of Oman (2011). For his contributions to tourism education and development, conservation, and higher education, he has been awarded the *Medal of the Order of Australia* (2011) as well as made a *Member of the Order of Australia* (2019).



**Mamoon Allan and Ross Dowling**  
Wadi Rum, Jordan (2010)

Together Mamoon Allan and Ross Dowling have written a number of papers and book chapters on Geotourism. This is their first book collaboration. They met in the late 2000s when Mamoon was a student at Edith Cowan University, Australia, conducting doctoral studies on geotourism. This photo was taken during a field visit to the Wadi Rum Protected Area UNESCO World Heritage Site, Jordan, in December 2010 (Source: Wendy Dowling).

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