

1. Record Nr.	UNINA9910502667703321
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Titolo	Wadi Flash Floods : Challenges and Advanced Approaches for Disaster Risk Reduction
Pubbl/distr/stampa	Singapore, : Springer Singapore Pte. Limited, 2021
ISBN	981-16-2904-8
Edizione	[1st ed.]
Descrizione fisica	1 online resource (559 p.)
Collana	Natural Disaster Science and Mitigation Engineering: DPRI Reports
Classificazione	NAT023000SCI026000SCI081000SCI091000SCI092000
Altri autori (Persone)	KantoushSameh A SaberMohamed
Soggetti	Natural disasters Hydrology & the hydrosphere Climate change Soil science, sedimentology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Intro -- Preface -- Acknowledgements -- Summary -- Reviewers List -- Contents -- About the Editors -- Part I Wadi Flash Flood Challenges and Strategies -- 1 Integrated Strategies for the Management of Wadi Flash Floods in the Middle East and North Africa (MENA) Arid Zones: The ISFF Project -- Abstract -- 1.1 Introduction -- 1.2 ISFF Project -- 1.3 Extreme WFF Events and Disasters in Wadi Systems in the MENA Region -- 1.4 Spatial and Temporal Distributions of Wadi Flash Flood Events -- 1.5 Rainstorms and Tropical Cyclones from the Indian Ocean 1.6 Impacts of Extreme Event Occurrences on Management -- 1.7 Hydrological Measurements of Wadi Systems and Flash Flood Forecasting -- 1.8 Image-Based Techniques -- 1.9 Risk Assessment Methods -- 1.10 Wadi Hydrological Modelling and Approaches -- 1.11 Utilized Hydrological Models in Arid Areas -- 1.12 Surface Runoff Interaction with Groundwater -- 1.13 Mitigation Measures Against Wadi Flash Floods -- 1.14 Structural Measures -- 1.15 Non-structural Measures -- 1.16 Preparedness and Emergency Planning -- 1.17 Education and Modification of Human Actions 1.18 Integrated Wadi Flash Flood Management and Strategies -- 1.19 Recommendations and Feedback from ISFF Participants -- 1.20

Research Challenges -- 1.21 Methods -- 1.22 Mitigation Measures -- 1.23 Conclusions -- References -- 2 Flood Risk Management Practices in Morocco: Facts and Challenges -- Abstract -- 2.1 Introduction -- 2.2 Overview of Flood Events in Morocco -- 2.2.1 Flood Events Historical Data -- 2.2.2 Flood Types Description -- 2.2.3 Climate Change and Extreme Rainfall Trends -- 2.2.4 Hydrological Impact of Climate Change -- 2.3 Flood Risk Management Framework 2.3.1 Management Approach -- 2.3.2 Institutional, Legal, and Policy Frameworks -- 2.4 Technical Aspects of Flood Risk Assessment Methods -- 2.4.1 The PNI Assessment Method -- 2.4.2 The PDAIRE Method -- 2.4.3 The MnhPRA Assessment Method -- 2.4.4 The OECD Approach -- 2.5 Flood Control Practices -- 2.5.1 Dams for Flood Control -- 2.5.2 Other Structural Measures -- 2.5.3 Flood Warning Systems for Flood Prevention -- 2.5.4 Other Non-structural Measures -- 2.6 Swot Analysis and Recommendations -- References -- 3 Flood Analysis and Mitigation Strategies in Algeria -- Abstract -- 3.1 Introduction 3.2 Reviewed Studies on Floods -- 3.3 Flood Inventory in Algeria -- 3.4 Notable Flash Floods in Algeria -- 3.4.1 Bab El Oued Flash Flood (Urban Flash Flood) -- 3.4.2 Wadi M'zab Flash Flood (UNESCO World Heritage Site) -- 3.5 Monitoring and Data Availability in Algeria -- 3.6 Forecasting and Early Warning Systems -- 3.7 Urbanization and the Increase in Vulnerability -- 3.8 Floods and Climate Change -- 3.9 Integrated Flood Risk Management Strategy in Algeria -- 3.10 Conclusion -- Acknowledgements -- References -- Part II Hydrometeorology and Climate Changes 4 Assessing the Impact of Climate Change on Temperature and Precipitation Over India

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## Sommario/riassunto

This open access book brings together research studies, developments, and application-related flash flood topics on wadi systems in arid regions. The major merit of this comprehensive book is its focus on research and technical papers as well as case study applications in different regions worldwide that cover many topics and answer several scientific questions. The book chapters comprehensively and significantly highlight different scientific research disciplines related to wadi flash floods, including climatology, hydrological models, new monitoring techniques, remote sensing techniques, field investigations, international collaboration projects, risk assessment and mitigation, sedimentation and sediment transport, and groundwater quality and quantity assessment and management. In this book, the contributing authors (engineers, researchers, and professionals) introduce their recent scientific findings to develop suitable, applicable, and innovative tools for forecasting, mitigation, and water management as well as society development under seven main research themes as follows: Part 1. Wadi Flash Flood Challenges and Strategies Part 2. Hydrometeorology and Climate Changes Part 3. Rainfall–Runoff Modeling and Approaches Part 4. Disaster Risk Reduction and Mitigation Part 5. Reservoir Sedimentation and Sediment Yield Part 6. Groundwater Management Part 7. Application and Case Studies The book includes selected high-quality papers from five series of the International Symposium on Flash Floods in Wadi Systems (ISFF) that were held in 2015, 2016, 2017, 2018, and 2020 in Japan, Egypt, Oman, Morocco, and Japan, respectively. These collections of chapters could provide valuable guidance and scientific content not only for academics, researchers, and students but also for decision-makers in the MENA region and worldwide.

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