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Nota di contenuto	Intro -- MOUNTAIN ECOSYSTEMS: DYNAMICS, MANAGEMENT AND CONSERVATION -- MOUNTAIN ECOSYSTEMS: DYNAMICS, MANAGEMENT AND CONSERVATION -- CONTENTS -- PREFACE -- EURO-MEDITERRANEAN TORRENTS: CASE STUDIES ON TOOLS THAT CAN IMPROVE THEIR MANAGEMENT -- ABSTRACT -- 1.0. EURO-MEDITERRANEAN TORRENTS -- 1.1. The Euro-Mediterranean Region -- 1.2. What are the Euro-Mediterranean Torrents? -- 1.3. Benefits and negative impacts of torrents in the Euro-Mediterranean region. -- 1.4. Objectives of the Book Chapter -- 2.0. CASE STUDIES FROM GREECE: TORRENT CLASSIFICATION AND ESTIMATING POTENTIAL WATERSHED EROSION USING GIS -- 2.1. Introduction -- 2.2. Case Study 1: Classification of Greek Torrents -- 2.2.1. Background -- 2.2.2. Methodology -- 2.3.3. Classification -- 2.3.4. Conclusions -- 2.3. Case Study 2: Evaluating Erosion Risk for Greek Torrents Using GIS -- 2.3.1. Background -- 2.3.2. Torrent Digital Elevation Models (DEMs) -- 2.3.3. Erosion Potential 3-D Maps -- 2.4. Conclusions -- 3.0. CASE STUDIES FROM SPAIN: WATER EROSION IN THE LA VIUDA RAMBLA AND RESTORATION EFFORTS IN THE ARAS TORRENT -- 3.1. Introduction -- 3.2. Case Study 3: Mediterranean Ramblas -- 3.2.1. Historical Background -- 3.2.2. The Case of the La Viuda Rambla -- 3.2.3. Spatial Modelling of Erosion and Deposition with USPED -- 3.2.4. Conclusions

-- 3.3. Case Study 4: Alpine Torrents -- 3.3.1. Historical Background -- 3.3.2. The Aras Torrent Watershed -- 3.3.3. Restoration Efforts for the Aras Torrent -- 3.3.3.1. Restoration Efforts: 1907-1995 -- 3.3.3.2. The Flood Event on August 7th, 1996. -- 3.3.3.3. Maintenance and Restoration Efforts: 1997-Today -- 3.3.4. Conclusions -- CONCLUSION -- ACKNOWLEDGMENTS -- REFERENCES -- ALTERED COMMUNITY DYNAMICS IN ROCKY MOUNTAIN WHITEBARK PINE FORESTS AND THE POTENTIAL FOR ACCELERATING DECLINES -- ABSTRACT -- OVERVIEW OF THE PROBLEM. WHITEBARK PINE AS A MAJOR FOREST TREE IN THE NORTH AMERICAN WEST -- Whitebark Pine as a Keystone and Foundation Species -- WHITEBARK PINE SEED DISPERSAL BY CLARK'S NUTCRACKER -- How Seed Dispersal by Nutcrackers Influences Whitebark Pine Communities -- SEED PREDATOR DYNAMICS -- WHY IS WHITEBARK PINE DECLINING? -- EXAMINING SEED PREDATION AND DISPERSAL IN RELATION TO WHITEBARK PINE FOREST HEALTH AND COMPOSITION -- Study Area -- Forest Structure, Composition, and Health -- Red Squirrel Seed Predation and Nutcracker Seed Dispersal -- CONCLUSION AND MANAGEMENT RECOMMENDATIONS -- Implications for Whitebark Pine Management -- ACKNOWLEDGMENTS -- REFERENCES -- MOUNTAINS ECOSYSTEMS AS A TEMPORAL SINK FOR PERSISTENT ORGANIC POLLUTANTS -- ABSTRACT -- INTRODUCTION -- PREVIOUS REPORTS ON POPS IN MOUNTAIN AREAS -- POP CYCLING IN MOUNTAIN ZONES -- AIR -- SNOW -- LAKE SEDIMENTS -- CONCLUSIONS -- ACKNOWLEDGMENTS -- REFERENCES -- IMPACT OF LAND-USE CHANGE ON SEASONAL DYNAMICS OF TOTAL PROTEIN FLOW FROM ROOTS OF MOUNTAIN MEADOW PLANT COMMUNITIES -- ABSTRACT -- INTRODUCTION -- MATERIALS AND METHODS -- RESULTS AND DISCUSSION -- CONCLUSION -- ACKNOWLEDGMENTS -- PEER-REVIEWER -- REFERENCES -- ATMOSPHERIC CARBON DIOXIDE TRANSPORT OVER MOUNTAINOUS TERRAIN -- Abstract -- 1. Introduction -- 2.Observations -- 3. Characteristics of Daytime Mountain Circulations and Their Transport of CO<sub>2</sub> -- 3.1.22 July -- 3.2.26 July -- 4. Conclusion -- Acknowledgment -- References -- INDEX.

## Sommario/riassunto

Mountain ecosystems serve as early warning systems both for climate change and pollution by persistent organic pollutants, in particular because mountains are located near the sources and could serve as monitors of the levels of POPs in the environment. This book presents topical research in the study of mountain ecosystems, including Euro-Mediterranean torrents; comparison of the impact of reduced rainfall on plant and soil processes in mountain and grasslands; atmospheric carbon dioxide transport over mountainous terrains and abandonment of previously managed meadows in mountain regions.