About the Book

The book aims to address the interdisciplinary targets of watershed management in mountain regions based on the current knowledge of the subject. The focus of the book particularly on monitoring research, and modeling the interactions between the climate water and aquatic ecosystem. The issues of watershed management in mountain regions in different parts of Europe, Africa, America and Asia have been the central theme of the book, which is divided into five sections: Institutional aspects in control of mountain regions: stream-flow process in mountain catchments: water chemistry and biota in mountain streams and lakes; effects of forest practice and climate on hydrological phenomena; and soil conservation and control of floods and landslides.

The contributions have been peer-reviewed and the interdisciplinary team of authors include experts from the specialized areas of geography, hydrology, chemistry, biology, forestry, ecology, economy and sociology. The practical applications and management strategies mentioned in the book, deal with the integrated resource management approach based on the compromise between the development, conservation/protection of the nature. Finally, the socio-economic and cultural aspects, and ecosystem prevalent in a mountain catchment are discussed in detail.

The book will be useful to environmentalist, engineers, watershed planners and policy makers.

Contents:

1. *Missions and history of the European forestry commission working party on the management of mountain watershed*
2. *Hydrological change management from headwaters to the Ocean*
3. *Water Management adaptation strategies for land use changes and increased climate variability in Mountain communities in western Canada*
4. *Environmental education and catchment citizenship in mountain regions*
5. *Integrated hydrological model for mountain ecosystem assessment*
6. *Investigation and modeling of subarctic wetland hydrology- A case study in the deer river watershed, Canada*
7. *Flash floods in alpine basins*
8. *Peak discharge prediction in torrential catchments of the French Pyrenees*
9. *Measurement of stream bed stability characteristics relevant to lotic ecosystems*
10. *Stream habitat fragmentation caused by road networks in Spanish low-order forest catchments*
11. *Mountain watershed in Lesotho: Water quality, anthropogenic impacts and challenges*
12. *Forest ecosystems changes and hydrological processes in western Carpathians*
13. *Hydrological effects of a large scale windfall degradation in the high tatra mountains*
14. *Interception storage in a small alpine catchment*

15. *Long term effects of silvicultural practices on groundwater quality in boreal forest environment*

16. *Modeling 100 years of C and N fluxes at fertilized Swedish mountainous spruce forests*

17. *The forest of lake balaton catchment and their role in soil conservation*

18. *Landslide disasters: Seeking causes- A case study from Uttarakhand India*

19. *Control of Landslide in mountain watersheds, japan*