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Sommario/riassunto	This book is a collection of 12 papers describing the role of hydrology in water resources management. The papers can be divided s according to their area of focus as 1) modeling of hydrological processes, 2) use of modern techniques in hydrological analysis, 3) impact of human pressure and climate change on water resources, and 4) hydrometeorological extremes. Belonging to the first area is the presentation of a new Muskingum flood routing model, a new tool to perform frequency analysis of maximum precipitation of a specified duration via the so-named PMAXP model (Precipitation MAXimum Time (duration) Probability), modeling of interception processes, and using a rainfall-runoff GR2M model to calculate monthly runoff. For the second area, the groundwater potential was evaluated using a model of multi-influencing factors in which the parameters were optimized by using geoprocessing tools in geographical information system (GIS) in combination with satellite altimeter data and the reanalysis of hydrological data to simulate overflow transport using the Nordic Sea as an example. Presented for the third area are a water balance model for the comparison of water resources with the needs of water users, the idea of adaptive water management, impacts of climate change, and anthropogenic activities on the runoff in catchment located in the western Himalayas of Pakistan. The last area includes spatiotemporal analysis of rainfall variability with regard to drought hazard and use of the copula function to meteorologically analyze drought.