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Sommario/riassunto	This book highlights the application of Geographical Information System (GIS) and nature based algorithms to solve the problems of water and water based renewable energy resources. The irregularity in availability of resources and inefficiency in utilization of the available resources has reduced the potentiality of water and water based renewable energy resources. In recent years various soft computation methods (SCM) along with GIS were adopted to solve critical problems. The book collects various studies where many SCMs were used along with GIS to provide a solution for optimal utilization of natural

resources for satisfying the basic needs of the population as well as fulfilling their burgeoning energy demands. The articles depict innovative application of soft computation techniques to identify the root cause and to mitigate the uncertainty for optimal utilization of the available water resources. The advantage of SCM and GIS were used to maximize the utilization of water resources under cost and time constraints in face of climatic abnormalities and effect of rapid urbanization.