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Nota di contenuto	Introduction -- A Geographical Investigation of the Rishiganga Disaster in Uttarakhand, India -- Multi-temporal analysis of vegetation extent using Google Earth Engine -- Spatial Prediction Modelling of Landslide Susceptibility Assessment Using Statistical Information Value Model-A Case Study of Dharchula, Pithoragarh District Uttarakhand, India -- Spatiotemporal change analysis of urbanization in Gurugram District of Haryana, India using a geospatial technique -- Rapid assessment of flood inundation due to tropical cyclones in part of Sundarbans in Google Earth Engine environment -- Random Tree Classifier for Land Use Classification in Hilly Terrain Using Sentinel-2 Imagery: A Case Study of Almora Town, Uttarakhand, India -- Temporal Investigation of

Chlorophyll-a in the Bhimgoda Barrage and Wetland Landscape Using Remote Sensing and GIS -- People’s perception-based identification of climate change risks faced by the smallholder community of the western Indian Himalayan region -- Development of a new built-up index: Studying the impact of tree and building height variation on Urban thermal field variance index -- Spectroscopy and Machine Learning: Revolutionizing Soil Quality Monitoring for Sustainable Resource Management -- Quantification of sedimentation of a tropical reservoir through satellite altimetry: A case study of Maithon reservoir -- Conclusion.

Sommario/riassunto

This book focuses on cloud-based platforms such as Google Earth Engine (GEE) for big data analysis using machine learning models and programming approaches to assess water and other natural resources, flood impact, land use land cover (LULC), global forest change, global forest canopy height and pantropical nation-level carbon stock, among other areas. Sustainable management of natural resources is urgently needed, given the immense anthropogenic pressure on the environment and the accelerated change in climatic conditions of the earth; therefore, the ability to monitor natural resources precisely and accurately is increasingly important. To meet this demand, new and advanced remote sensing tools and techniques are continually being developed to monitor and manage natural resources effectively. Remote sensing platforms use various sensors to record, measure and monitor even minor variations in the earth's surface features as well as atmospheric constituents. GEE can provide a detailedoverview of the potential applications of advanced satellite data in natural resource monitoring and management. This book shows how environmental and ecological knowledge and satellite-based information can be effectively combined to address a wide array of current natural resource management needs. Each chapter covers the different aspects of a remote sensing approach to effectively monitor natural resources and provide a platform for decision making and policy. The book is a valuable resource for researchers, scientists, NGOs, and academicians working on climate change, environmental sciences, agriculture engineering, remote sensing and GIS, natural resources management, hydrology, soil sciences, agricultural microbiology, plant pathology and agronomy.