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| Nota di contenuto | A changing environmental landscape -- Impact of environmental risk on society -- Integrated risk mitigation and resilience measures. |
| Sommario/riassunto | This book provides huge knowledge and data in the fields of geospatial sciences, earth environmental sciences, humanities, and social sciences, which target a diverse range of readers, such as academics, scientists, students, environmentalists, meteorologists, urban planners, remote sensing, and GIS experts. Earth environment (ecological envelope of geosphere, biosphere, hydrosphere, atmosphere and cryosphere) faces a significant challenge from different risks and threats due to due to rapid changes in global land use, population increase and pollution. They might drastically impair the ecosystem's |

ability to maintain long-term service levels while bolstering the economic, social, and environmental pillars of sustainable development. Therefore, risk assessment (RA) has lately become a prominent research topic and a powerful mechanism for enforcing legal activities-related environmental restoration and health improvements to do sustainable development. The United States Environmental Protection Agency (USEPA) first used the risk assessment approach in 1980, and since then, it has expanded and become standard practice in many areas of ecological research. Some practices are air quality assessment, land degradation assessment, natural hazards risk assessment, urban surface ecological health condition, wetland and forest health assessment and drinking water quality assessment. However, recently risk assessment alone is not sufficient to propose any sustainable management plans. Also, there is no universal strategy for conducting risk assessments, and insufficient expertise with the methodology may result in erroneous findings. Therefore, scientists are increasingly interested in developing resilience strategies with AI and geospatial-based risk assessment to lower environmental risk. Different resilience approaches make different assumptions about the system dynamics involved in resilience-based environmental risk and impact assessment. Therefore, this book seeks to showcase the most current advances in risk and hazards assessment of environments with resilience strategies to mitigate the prevailing environmental issues with the help of remote sensing, GIS, artificial intelligence, and state-of-the-art frameworks like PSR, VIOR, nature-based solutions. .