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| Descrizione fisica | 1 online resource (463 pages) |
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| Soggetti | Geographic information systems Environmental monitoring Physical geography Ecology Geographical Information System Environmental Monitoring Earth System Sciences Environmental Sciences |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Chapter 1-Why this Topic? -- Chapter 2-Global Warming Impact on Earth Systems -- Chapter 3-The IPCC Reports on Global Warming and Land Changes -- Chapter 4.NOAA Operational Environmental Satellites for Earth Monitoring -- Chapter 5-New Remote Sensing Vegetation Health Technology -- Chapter 6-Cause of Climate Warming -- Chapter 7- Land Cover Changes from Intensive Climate Warming -- Chapter 8- Global Warming Crop Yield and Food Security -- Chapter 9-Remote Sensing Malaria During Global Warming -- Chapter 10-Malaria Performance Trend During 1981-2022 -- Chapter 11-Remote Sensing Drought Watch and Food Security -- Chapter 12-Has Drought Intensified During 1981-2021 Global Warming? |
| Sommario/riassunto | This book discusses the detrimental consequences of climate-related land changes over a 40-year period between 1981 and 2020, and |

focuses on how climate warming is deteriorating the agricultural system due to excessive heat, lack of moisture and more intensive and widespread droughts leading to a reduction of agricultural production. Most of the existing literature on the unfavourable consequences of global warming for land are based on a relatively short period of weather station data, covering local land areas with limited networks and monitoring parameters. These concerns have led to the use of satellite data, whose measurements are controlled by such vegetation characteristics as chlorophyll, carotenoids, moisture contents in the plants and temperature inside the vegetation community. Therefore, the discussion of this book is completely based on high-resolution global land surface measurements by the sensors on the National Oceanic and Atmospheric Administration's (NOAA) operational afternoon polar-orbiting satellites. The book also focuses on understanding climate change impacts on land changes where humans are living, and combines biophysically-grounded methods and the 40-year data to develop models for monitoring large-scale Earth warming impacts on land and for timely prediction of climate consequences for humans. These 40-year trends in land characteristics will help to better inform the assessment of potential changes in the future and how to reach human sustainability. The book will be of interest to scientists using satellite remote sensing to track climate change impacts on land over time, as well as students and researchers in climatology and environmental sustainability. .
