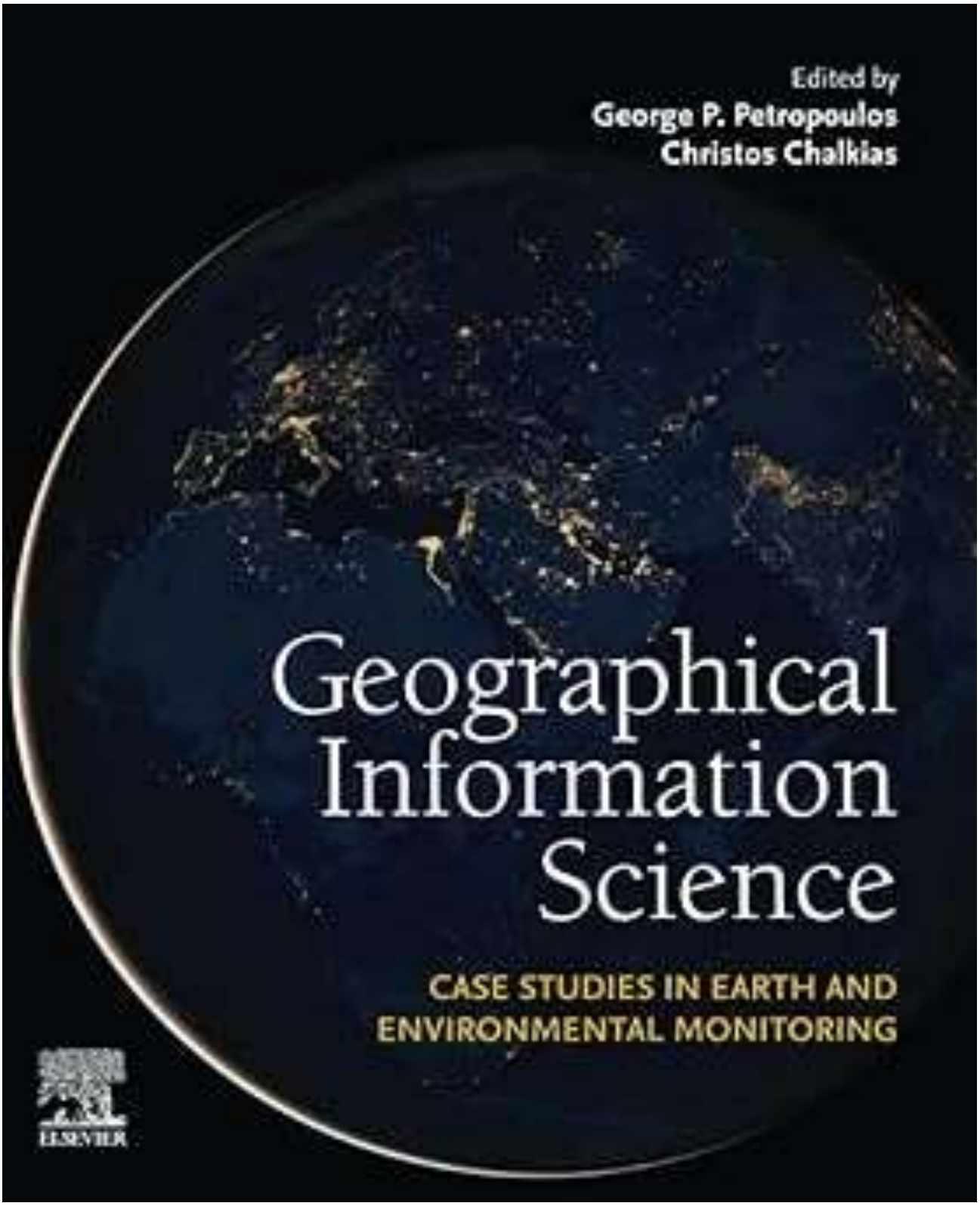
Edited by
George P. Petropoulos
Christos Chalkias
Geographical Information Science
CASE STUDIES IN EARTH AND ENVIRONMENTAL MONITORING
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# About the book

## Description

*Geographical Information Science: Case Studies in Earth and Environmental Monitoring* provides detailed remote sensing and GIS methods and algorithms and technology comparisons, focusing on a wide range of environmental applications. The geoinformation technologies are demonstrated through templated case studies detailing real world use of the techniques and clarifying methods, tools, and practical solutions to environmental mapping and monitoring. The book utilizes remote sensing and geospatial data from the most recently launched satellites and applies the latest geospatial data approaches and analysis software tools (both commercial and open source).

This book is a comprehensive reference for researchers, academics and technicians in the fields of geospatial science & technology, remote sensing, and environmental science; or those processing and analyzing geospatial data for monitoring and modelling.

## Key Features

- Focuses on global, templated case studies of GIS applications to environmental monitoring
- Includes methodologies allowing readers to recreate techniques and models and workflows that can be used in their own work
- Covers a plethora of topics in applied geosciences, providing environmental and geographical applications of practical interest

# Details


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# Editors


## George P. Petropoulos

Geoinformatics, Department of Geography, Harokopio University of Athens, Athens, Greece

## Christos Chalkias

Applied Geography and GIS, Harokopio University of Athens, Athens, Greece

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# Chapter 24 - Techniques and tools for monitoring agriculture drought: A review

Varsha Pandey [1], Prashant K. Srivastava [2], Anjali Kumari Singh [3], Swati Suman [4], Swati Maurya [5]



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## Abstract

Drought is a global phenomenon that silently spreads and creates an insidious hazard by destabilizing the hydrological cycle over a large region. Due to increased frequency, severity, and negative impact on climate conditions, droughts have drawn worldwide attention. Real-time drought monitoring and quantification is a prerequisite to ensure the well-being of inhabitants and appropriate management of water, food, and social resources. This chapter provides a comprehensive overview of the agricultural drought and its association with other drought types and monitoring using satellite remote sensing images and various hydrological model-simulated datasets. Furthermore, a few widely used and essential indices for agricultural drought were discussed along with their importance and limitations. Usage of an advanced drought assessment platform and related case studies were also discussed. The chapter concludes with the challenges in agriculture drought monitoring and provides the roadmap for future research.