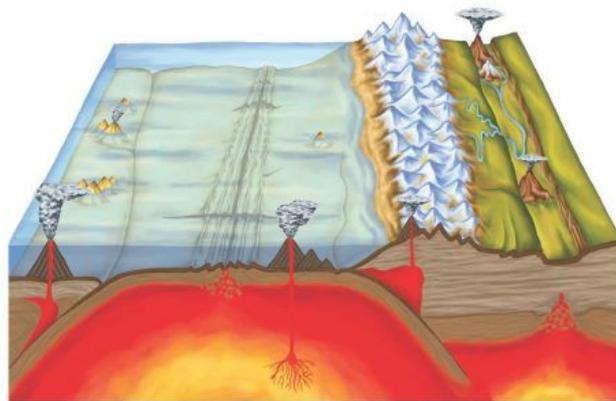




Earth & Marine Sciences
New Titles

Recent Advances in Geophysics

Christina N. Brandt
Editor



Geology and Mineralogy Research Developments

NOVA

Titles published by Nova Science

A Description of
Greenland

Land Degradation

Tribology in Geology
and Archaeology

An Evaluation of
Groundwater Storage
Potentials in a
Semiarid Climate

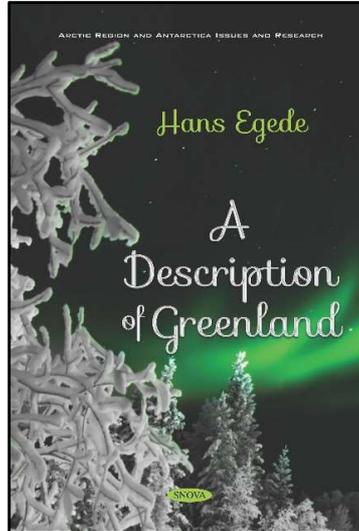
Unsaturated Soils

Managing
Stormwater: Practices
and Challenges for
Reuse and Recycling

Recent Advances in
Geophysics

Encyclopedia of
Geology (12 Volume
Set)

Horizons in Earth
Science Research -
Volume 19



A Description of Greenland

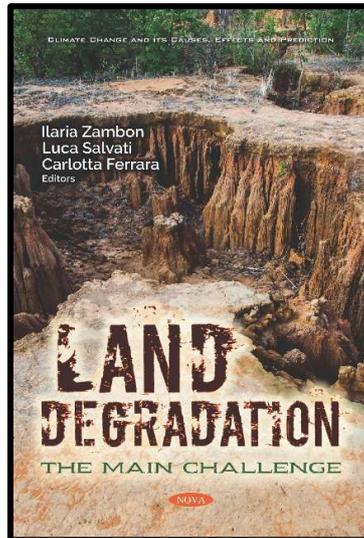
Hans Egede

Hans Egede was a Lutheran missionary who launched mission efforts to Greenland. He embarked for Greenland, with his wife and four small children, the 12th of May, 1721; and he landed in Ball's River, the 3d of July. He established a successful mission among the Inuit and is credited with revitalizing the island.

March 2019 - 185 pages

PB (9781536150773) £90.99

Publisher: Nova Science Publishers



Land Degradation The Main Challenge

Edited by Ilaria Zambon, Luca Salvati, Carlotta Ferrara

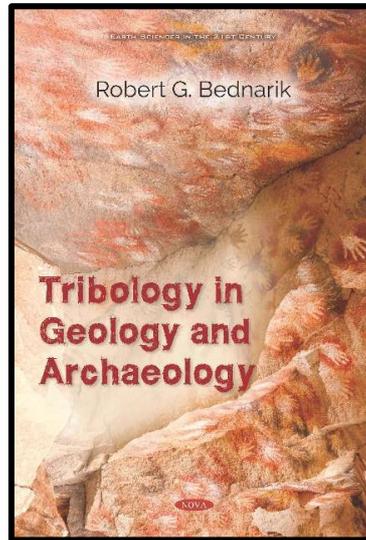
Desertification is one of the most important issues facing our societies because of its serious consequences for human health, landscape and the environment. Nonetheless, the issue has been in the eyes of media, decision makers and public opinion and it should be noted that this interest tends to be cyclical, corresponding to peaks that reflect the outbreak of emergency situations related to prolonged episodes of drought and water scarcity, in turn associated with climate changes.

This volatile interest has focused on the relationship between desertification and climate change (and more generally on the biophysical factors underlying desertification), neglecting the important role played by social, economic, cultural, political and institutional factors. This role — brought to the fore by the most recent socioeconomic dynamics at various spatial scales — requires dedicated approaches from the scientific point of view and a less sensationalistic dissemination of research evidence. This book proposes a trans-disciplinary vision on issues of desertification and land degradation, focusing on long-term socio-ecological dynamics as an interpretative key to local systems' complexity.

June 2019 - 154 pages

PB (9781536155754) £78.99

Publisher: Nova Science Publishers



Tribology in Geology and Archaeology

Robert G. Bednarik

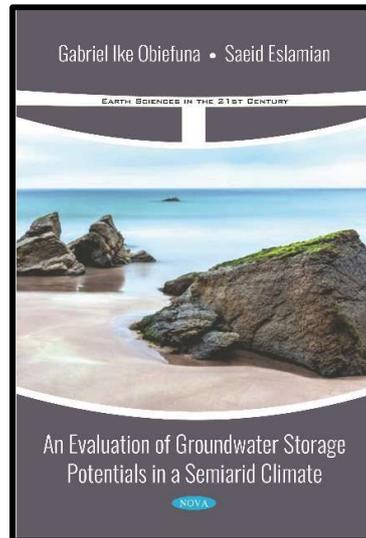
Tribology, the science of interacting surfaces in relative motion, has traditionally focused on technological applications, although some attention has been given to geotribology and tribochemistry. This volume explores the geological applications of tribology in some detail, before introducing the entirely new subdisciplines of archaeotribology and the tribology of rock art. The various geological, archaeological, and rock art applications are then correlated through the detailed description of a tribological phenomenon of the natural world that was only discovered most recently, kinetic energy metamorphosis (KEM).

This newly described phenomenon was first observed as a by-product of rock art production, but it was subsequently recognized as a widespread physical process whose effects are much more common in both geology and archaeology. Not only does this book illuminate the holistic and thus inter-disciplinary character of natural processes, it also presents the need to view tribology as a science connected to many other fields. Therefore, this volume advocates an extended scope for a science traditionally focused on aspects of friction, wear, and lubrication of machines. This enhances the importance of tribology, while at the same time enriching disciplines that have never even been considered to have potential connections with tribology. The book therefore succeeds in demonstrating that, ultimately, all disciplines are interconnected in the magnificent web of science, in which all fields of scientific enquiry must play a role.

March 2019 - 322 pages

HB (9781536149098) £219.99

Publisher: Nova Science Publishers



An Evaluation of Groundwater Storage Potentials in a Semiarid Climate

Gabriel Ike Obiefuna, Saeid Eslamian

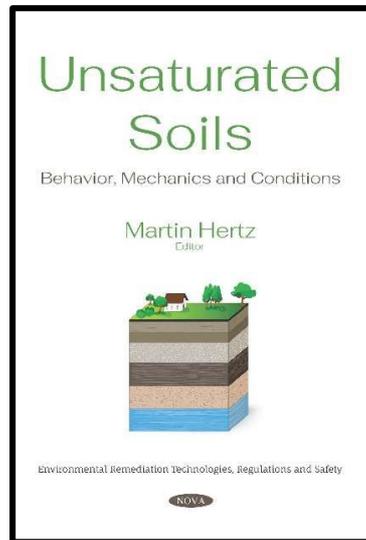
This book focuses on evaluating the groundwater storage potentials of a semiarid environment of northeastern Nigeria. The book uses the proven and well established methods and approaches in identifying aquifer types and calculating aquifer parameters, simulating groundwater flow net and transport. We also employ the measured and estimated water budget parameters in evaluating groundwater storage potentials of a hitherto virgin area of Nigeria.

We have featured more than 24 figures, diagrams and illustrations to highlight the major themes, that are important in the retention of key concepts. This book presents a holistic approach to advances in groundwater hydrology from recent developments in reservoirs and hydraulics and analytic modeling of transient multi-layer flow. This book therefore integrates the real life data and gives the examples of processes that make the content practical and implementable. These are the examples of developments in groundwater hydrology that underscored perspectives regarding the challenges faced by industry, professionals, researchers and academia.

April 2019 - 122 pages

PB (9781536149005) £90.99

Publisher: Nova Science Publishers



Unsaturated Soils Behavior, Mechanics and Conditions

Edited by Martin Hertz

This compilation opens with an exploration of the vadose, or unsaturated zone, which is of utmost importance as the nexus between surface water and groundwater. It is the link between what happens on the surface and what happens below, inside the aquifers. As such, understanding this underground natural environment is essential for the sustainable development of society.

Due to the complexities involved in considering the hysteretic response of the Soil Water Characteristic Curve and its dependency on volume changes, these two features are often ignored in numerical studies of unsaturated soils. To facilitate their use in numerical modeling, a model for the Soil Water Characteristic Curve equation based on the bounding surface concept is proposed.

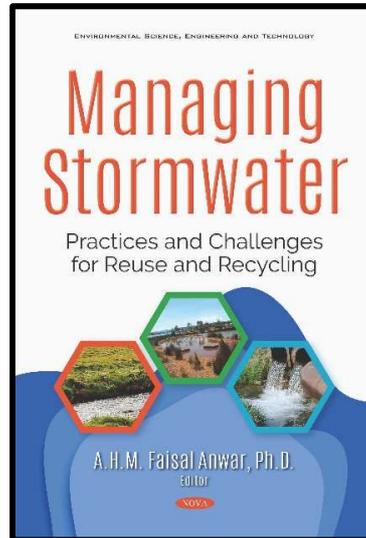
The authors go on to focus on the temperature distribution and water migration in unsaturated soil, which is of significant importance because these factors are related to the thermal-physical properties of soil. The changes in these properties may cause disastrous engineering problems such as the cracking of pavement, damage of structure foundation and fracture of pipelines.

Lastly, *Unsaturated Soils: Behavior, Mechanics and Conditions* addresses the measurement and expression of the mass chemical potential in the presence of superficial layers induced by a complex structure. By definition, the mass chemical potential of a constituent in a soil represents the variation of the internal energy of the medium when a unit mass of the constituent is transferred to a reference state with the entropy, volume and mass of the other constituents remaining constant.

June 2019 - 211 pages

PB (9781536159851) £90.99

Publisher: Nova Science Publishers



Managing Stormwater Practices and Challenges for Reuse and Recycling

Edited by A.H.M. Faisal Anwar

Current freshwater availability is reducing because of climate change, rapid urbanization, and an increase in population. Due to these situations, the identification of alternative water resources has become a main focus of research world-wide. Among all alternatives, stormwater has been found as most promising for reuse and recycling. The rapid development of urban and suburban areas has limited the natural infiltration of storm water because of increased impermeable areas, which in turn, increase the risk of urban and suburban flooding.

Urban and suburban stormwater runoff carries a significant amount of pollutants, such as heavy metals, hydrocarbons, pesticides, and bacteria. The sources of pollutants and their contribution to urban stormwater runoff are highly dependent on the land use pattern. These pollutants are harmful to the environment and a threat to human health at higher concentrations. In order to maintain healthy waterways, it is necessary to develop sustainable management of stormwater.

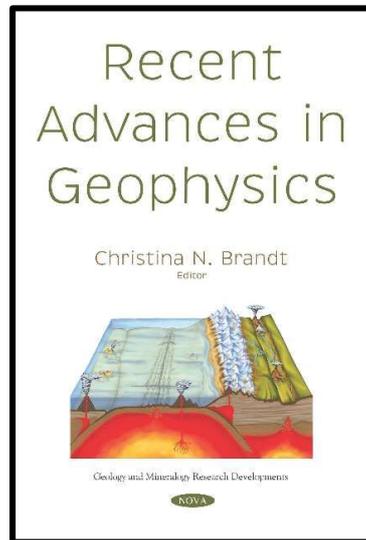
Stormwater management practices involve many challenges for its reuse and recycling, which are the main focus areas of this book. Available management practices consist of collecting and discharging the stormwater into rivers, ponds, or nearby retention basins. The best management practices (BMPs) may include oil and grit separators, grassed swales, vegetated filter strips, biofiltration/bioretention ponds, constructed wetlands, gross pollutant traps, and catch basin inserts.

This book has eleven chapters that describe the practices and challenges of different BMPs for stormwater management. These include combined sewer networks, different rainwater harvesting techniques, constructed wetlands, MUSIC modelling of bioretention systems, catch basin inserts, permeable pavements, the use of adsorbents for cleaning stormwater, low impact developments, and membrane-based technologies for stormwater treatment.

March 2019 - 274 pages

HB (9781536152500) £219.99

Publisher: Nova Science Publishers



Recent Advances in Geophysics

Edited by Christina N. Brandt

In the opening chapter of this compilation, the authors process and geologically interpretate the marine geological mapping of a detailed grid of very high resolution seismic profiles recorded in the Campania continental shelf between the Solofrone river mouth and Agnone.

Following this, an integrated analysis of the volcanic structures located in the subsurface of Naples and the Gulf of Gaeta is presented based on the geologic interpretation of seismic profiles. The goal of this study is to advance the seismo-stratigraphic knowledge concerning volcanic structures occurring in this sector of the Tyrrhenian offshore.

In the closing study, geochemical and tomography techniques were applied to agricultural area near the coastline of Spain with the following objectives: determining the spatial and vertical distribution of nutrients and soluble salts in the agricultural area; identifying the different layers of soil and subsoil; and evaluating the relationships between the identified layers and leaching of salts and nutrients.

August 2019 - 114 pages

PB (9781536162073) £78.99

Publisher: Nova Science Publishers



Encyclopedia of Geology (12 Volume Set)

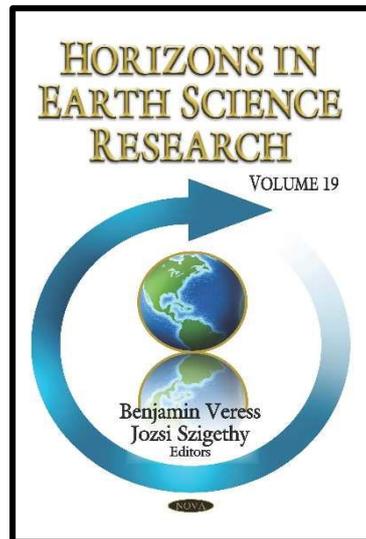
Edited by Enrique Walker, Darrell Gomez

The Encyclopedia of Geology organizes researchers from around the world in geology and related disciplines and maintains an up-to-date reference work for readers worldwide.

June 2019 - 5659 pages

HB (9781536155037) £1,571.99

Publisher: Nova Science Publishers



Horizons in Earth Science Research Volume 19

Edited by Benjamin Veress, Jozsi Szigethy

In the opening chapter of *Horizons in Earth Science Research. Volume 19* uses obtained kinetic data to estimate the growth rate of the basic copper carbonates with the participation of complexing agents, thus demonstrating that natural organic complexing agents can play an important role in the formation of copper carbonate minerals.

The next section deals with how the presence of organic matter, which is much softer than the inorganic matrix, affects gas production in shale reservoirs. A comprehensive study of the characteristics of organic matter can improve our understanding of organic-rich shale reservoirs.

Additionally, remote-sensing for oil spills is reviewed. The technical aspects of sensors are summarized and the benefits and limitations of each sensor are given.

In the last few decades, as the number of reclamation projects has increased, the diversity of the landscape has also increased, as has the proportion of ecologically valuable elements (such as forests, meadows and water bodies) which can approximate the original landscape with a greater degree of ecological stability. More accurate quantification of the extent of mining activities and reclamation projects is important for exploration of environmental impacts on the ecosystem.

In order to address coastal degradation, the Atlantic Andalusian Coastal District has performed beach and dune restoration planning, described by the authors as an example of sustainable coastal management.

In the penultimate chapter, the method of the gravitational mass spectroscopy is used to investigate the inhomogeneity of the density in the surface layers of the Earth's crust under the European continent in the area of massive deposits of hard coal.

June 2019 - 256 pages

HB (9781536158267) £238.99

Publisher: Nova Science Publishers



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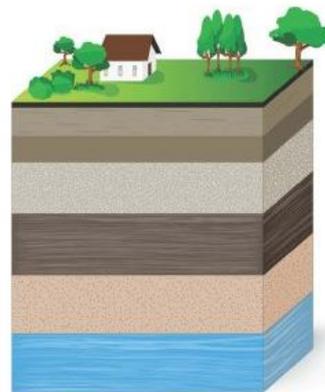


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