



River Publishers

River Publishers Book Catalogue

Series in Chemical and Environmental
Engineering

River Publishers Series in Chemical and Environmental Engineering

Peri-urban Conflicts and Environmental Challenges: A Mediterranean Perspective

Editors:

Antonio Tomao, University of Tuscia, Italy

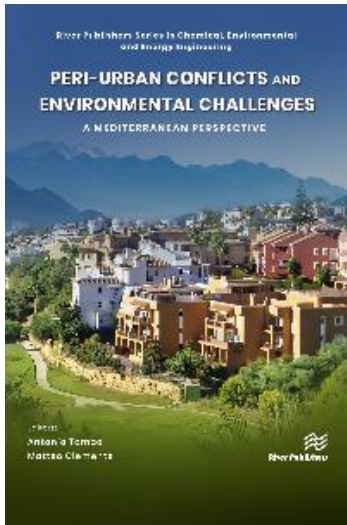
Matteo Clemente, University of Rome, Italy

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e-ISBN: 9788770226813

Price: £ 0.00 | \$ 126.50

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Description:

Urban expansion and the preservation of fringe landscapes are clearly interconnected issues. This book discusses the relationship between landscape and peri-urban agriculture and the possible implications of sustainable land management for fringe land quality, proposing a framework to evaluate the latent nexus between agro-forest systems and human settlements in Southern Europe. Eco-sustainable planning integrated with multi-faceted policy actions (social, economic, cultural and political dimensions) is a relevant approach to reinforce sustainability of fringe landscapes. Permanent assessment of these factors allows for the implementation of different development scenarios. The present work definitely contributes to systemic and multi-scale approaches informing environmental policies, with the aim of achieving an integrated management of peri-urban agricultural landscapes.

Keywords: Mediterranean city, urban form, land consumption, urban planning, green infrastructures, landscape planning, socioeconomic context, Southern Europe.

River Publishers Series in Chemical and Environmental Engineering

The Urban Forest in the Age of Urbanisation

Author: Samaneh Sadat Nickayin, Lecturer, Agricultural University of Iceland (AUI), Iceland

ISBN: 9788770226516

e-ISBN: 9788770226509

Available From: December 2021

Price: € 95.00



Description:

The Urban Forest in the Age of Urbanization seeks to reflect on the connotation of urban forestry in line with related emergent holistic theories. Today, much of the planet is urbanised and planners debate "Planetary Urbanization", economists discuss "The Global City", ecologists describe the planet's biodiversity hotspots, and climate scientists warn of a "global" crisis. We might think therefore that focusing on forestation approaches at the Urban and peri-urban "edge", might be reductionist. However, if the city is everywhere, and everything is a city, if the urbanised world now is a chain of metropolitan areas connected by places and corridors of communication, then what is not urban? And above all, which forests are not urban forests?

Starting from the dualism between city and forest and its evolution towards holism, the book seeks to create a framework of dialectical approaches. The case studies included analyse a wide range of urbanisation "processes" to review the practical approaches of urban forestry, in line with the global crisis of the era of globalisation, when climate change, population growth, implosions and explosions of urbanisation, lack of arable land and food are unavoidable.

Keywords: Urban Forestry, Planetary forestation, Implosions and explosions of urbanisation, Forestration in shrinking cities, Forestration in self-constructed cities, Forestartion in 21st century

River Publishers Series in Chemical and Environmental Engineering

Coil Tubing Unit for Oil Production and Remedial Measures

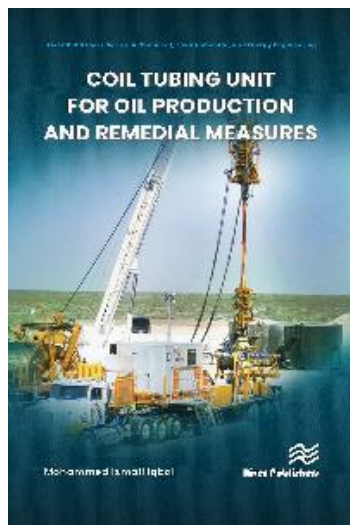
Author: Mohammed Ismail Iqbal, University of Technology and Applied Sciences, Nizwa, Oman

ISBN: 9788770226905

e-ISBN: 9788770226899

Available From: December 2021

Price: € 95.00



Description:

Well activation is one of the most important aspects in the oil and gas industries and nitrogen gas is predominately used. The gas, being light, is sent down the producing reservoir which will enhance the production or improve the flow of crude oil. In addition to the methods used to increase production there are several problems like sand production and water production from the producing wells.

Sand production occurs when the destabilizing stresses at the formation face exceed the strength of the natural arching tendencies and/or grain-to-grain cementation strength. Ideally, during oil production, the formation should be porous, permeable and well consolidated through which hydrocarbons can easily flow into the production wells. But sometimes, especially during production from unconsolidated sandstone reservoirs, the produced hydrocarbons may also carry large amounts of sand into the well bore and sand entering production wells is one of the oldest problems faced by oil companies and one of the toughest to solve. These unconsolidated formations may not restrain grain movement, and produce sand along with the fluids especially at high rates.

Water production is also a problem that many reservoir or production engineers face in day-to-day life. As engineers we should be able to decide whether water control solutions should be applied or not. The excess production of water is caused by the depletion of the reservoir and simply sweeps away most of the oil that the reservoir can produce.

This book gives an information how well activation using nitrogen is carried out, and how sand control and water control issues can be resolved.

Keywords: Water control, permeability, porosity, sand control, well activation, nitrogen, water production, sand production.

Inequality – The Unbeatable Challenge

Editors:

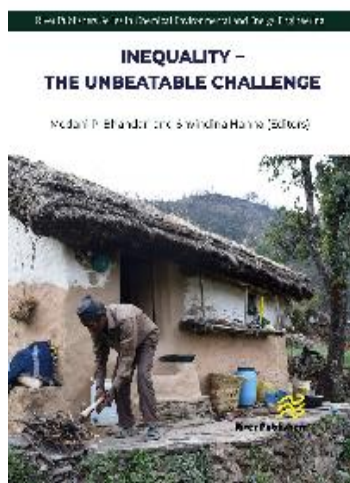
Medani P. Bhandari, Akamai University, Hawaii, USA and Sumy State University, Ukraine
Shvindina Hanna, Sumy State University, Ukraine

ISBN: 9788770226233

e-ISBN: 9788770226226

Available From: October 2021

Price: € 98.50



Description:

This edited book presents some unexplored issues of economic inequality, including case studies of various countries. Inequality is a chronic and divisive factor of society. Inequality exists as an integral attribute of human development. Communities, nations, and systems are not evolving at the same speed and rate and thus require different resources in different amounts. However, the distribution of winnings is also uneven due to the multidimensionality of influencing factors.

When we talk about inequality, it is not just inequality of income or wealth; it is first, inequality in access to priorities and human needs - to shelter, to clean water, air, health care, and also to appropriate vaccination systems and assistance, security systems and safety guarantees for the future. Past financial crises and the current pandemic shock has revealed bugs in the system, shaking it and changing our perception of the norms.

We may have no doubts that inequality is an unsolved problem, but now we need to find out - is it unbeatable? There is still lack of knowledge around how inequality has been grounded throughout human civilization, why society is stratified and classified, economically, politically, socially, and religiously; and why the discrimination due to gender, sexual orientation, country of origin, language differences, immigration status, caste, race and ethnicity? This book addresses these issues in a holistic way as well as including case studies of various countries. It tries to find out why inequality has been unbeatable and what would be the best policies to overcome this challenge.

Technical topics discussed in the book include:

- Inequality the problems of all times, an unbeatable challenge
- Problems and consequences inequality
- Gender Inequality
- Covid Pandemic the booster of inequality
- Inequalities in Education / Healthcare / Food Supply
- Inequality due to gender, age, origin, ethnicity, disability, sexual orientation, class, refugee status and religion
- Social exclusion is consumption patterns- economic patterns

Keywords: Inequality, Gender, Age, Origin, Ethnicity, Disability, Sexual Orientation, Class, Religion, Social Justice, Dominance, Labour Inequality, Social Exclusion, COVID, Inequality, Sustainable Development Goals, Labour Inequality, Economic Growth, Regional Disparities, Green Investments, Economic Instrument, Public Institutions, Good Governance, Venture Financing, Innovative Enterprises, Globalization, National Economy, Energy Development, Social Responsibility, Motivational Tool, Decision-Making, CSR, Hospitality, HRM, Tourism Manager, Hospitality Management, Social Impact, United Nations, World Trade Organization, WHO, Nepal, USA, India, Mexico, Ukraine, European Union, Russia, Pakistan, Serbia, Iran, Nigeria, Bulgaria, Finland, Middle East, Latin America, North America, Asia, Pacific.

River Publishers Series in Chemical and Environmental Engineering

Complexity and Resilience Urban experiences in Southern Europe

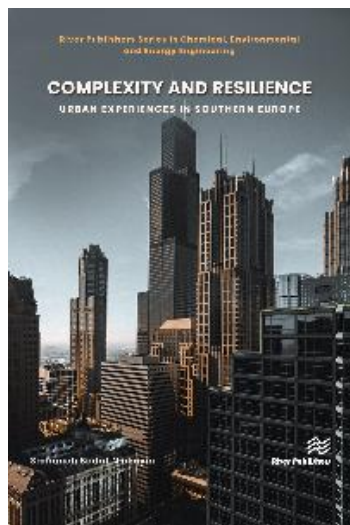
Editor: Samaneh Sadat Nickayin, Agricultural University of Iceland, Iceland

ISBN: 9788770226493

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Available From: October 2021

Price: € 40.00



Description:

Processes driving urban growth are inherently related to multiple socio-economic factors, making the analysis of urban form and functions a challenging and complicated endeavour. Several fundamental factors and contextual indicators contribute to identify the main determinants of urban growth, that include economic and demographic variables, the socio-spatial structure, territorial patterns, institutional, religious and cultural attributes. Understanding spatio-temporal patterns of economic resilience can support the adoption of explicit developmental policies addressing specificities and local weaknesses of regional contexts.

Thirty years after the seminal work entitled 'The Mediterranean City in Transition' by Lila Leontidou, the present contribution re-formulates a narrative framework interpreting the medium-term evolution of Southern European cities and generalises this frame to the analysis of other metropolitan areas with similar morphological and functional characteristics worldwide. Going beyond traditional Mediterranean discourses grounded on economic backwardness, social secularism, and demographic mix, an original interpretation of Mediterranean urbanities is proposed related to the local governance, real estate bubbles, land-use mix, and deregulation in urban expansion. Focusing on socioeconomic development processes in the Northern Mediterranean, the lost opportunity to reduce regional disparities and to give value to scenic and cultural values of the cities and the surrounding countryside are additional issues considered in this vision. Basing on a narrative analysis of ecologically fragile and socially fragmented Mediterranean contexts, the pervasiveness of a structural crisis - affecting regional and country economic systems, while infiltrating in the institutions, local governance systems, and the society, is finally debated as a contribution to a better understanding of complex urbanities worldwide.

Keywords: Spatial planning, urbanization, sustainable development, economic crisis, Mediterranean Europe

River Publishers Series in Chemical and Environmental Engineering

Economic Inequality – Trends, Traps and Trade-offs

Editors:

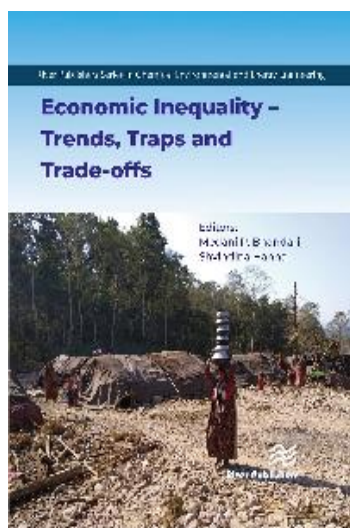
Medani P. Bhandari, Akamai University, Hawaii, USA; Sumy State University, Ukraine
Shvindina Hanna, Sumy State University, Ukraine

ISBN: 9788770223911

e-ISBN: 9788770223904

Available From: July 2021

Price: € 95.00



Description:

The book “Economic Inequality – Trends, Traps and Trade-offs” presents the unexplored issues of economic inequality, including case studies of various countries. Inequality is a chronic divisive factor of society. It is well known that inequalities (such as economic, social, cultural, religious, geographical, etc.) have been omnipresent in human society. Inequalities can be found within each family, each community, and each nation and thus globally. Inequality is a major cause of political, economic, social instability, and creates crisis and conflict within society. A major cause of inequality is unequal, uneven, biased, power centric distributions of human economic, social, political, cultural and spiritual human necessities. The edited book examines the major parameters of the socio-economic issues of inequality and focuses on the key economic issues of inequality, namely, income and wealth distribution, equity & equality of outcome, and equality of opportunities. Economic inequality is measured by wealth, income proportions in distribution and consumption patterns in a specific area. Mostly, inequality is measured using various statistical tools including the Gini Coefficient, inequality adjusted human development index, 20:20 ratio, Palma ratio, Hoover index, Galt score, Coefficient of variation, Theil index, wage share etc. However, not all income can be measured by these tools. By using case studies, this book encourages us to reframe economic development through the lens of growing inequalities and disparities. Economic growth per se is disproportional, and the efforts of scholars, practitioners and policymakers should be directed to empower the marginalized of society in a way that ‘no one should left behind’ (UN Slogan). The main challenges and focus of every chapter are different, and yet in combination, they give an integrated understanding of the phenomenon of economic aspects of inequality. This book will be useful to policymakers, social and environmental activists, agencies, educators and practitioners in the sphere of economic inequality. The methodology of the research can be replicated and taken forward by future researchers in the field.

Technical topics discussed in the book include:

- Inequality the problems of all times;
- Can inequality be reduced through SDGs?
- Problems and consequences inequality
- Inequalities Level Estimation
- Threat to The Sustainable Development
- Forecasting Inequality
- Liberal Socialism
- CORONOMICS

Keywords: Inequality, Sustainable Development Goals, Labour Inequality, Economic Growth, Liberal Socialism, CORONOMICS, Regional Disparities, Green Investments, Economic Instrument, Public Institutions, Good Governance, Venture Financing, Innovative Enterprises, Globalization, National Economy, Energy Development, Social Responsibility, Motivational Tool, Decision-Making, United Nations, World Trade Organization, WHO, Nepal, USA, India, Mexico, Ukraine, European Union, Russia, Pakistan, Serbia, Iran, Nigeria, Bulgaria, Finland, Middle East, Latin America, North America, Asia, Pacific

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River Publishers Series in Chemical and Environmental Engineering

Social Inequality as a Global Challenge

Editors:

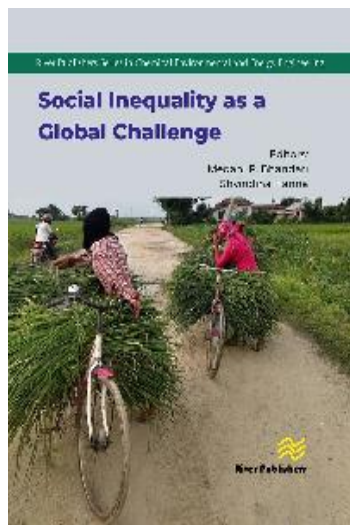
Medani P. Bhandari, Akamai University, Hawaii, USA; Sumy State University, Ukraine
Shvindina Hanna, Sumy State University, Ukraine

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Description:

This book discusses the factors behind the inequalities embedded within our social, economic and political systems. Social inequalities are especially seen in the service sectors “in the differences of access to healthcare, education, social protection, housing systems, childcare, elderly care etc. Cultural inequality, which segregates people from the mainstream based on recognition problems with a specific groups’ social status, language, religion, customs and norms, is another widespread issue. This book tries to present an accurate picture of these issues with cases studies from various countries. Mostly, when we talk about inequality, the focus is on economic inequality; however, much inequality persists, especially discrimination due to gender, age, origin, ethnicity, disability, sexual orientation, class, and religion. To end this situation there is a need for social, economic, and political reform. Until or unless the marginalized groups are empowered, the inequality issue cannot be solved or even minimized. On the basis of various case studies, this book encourages us to rethink societal development through the lens of growing inequalities and disparities. The book presents new insights for evaluating the progress on social development. The book highlights the current challenges of social inequality. In combination this collection of edited papers gives an integrated understanding of the question of “why is society unequal”? This book is aimed at those stakeholders, who want to make or contribute to change and build an undivided, socially inclusive society, and to those who want to contribute to empowering society in the Twenty-First century.

Topics discussed in the book include:

- Problems and consequences of inequality
- Gender Inequality
- LGBTQ+ discrimination
- Inequalities in education

Keywords: Inequality, Gender, Age, Origin, Ethnicity, Disability, Sexual Orientation, Class, Religion, Social Justice, Dominance, Labour Inequality, Social Exclusion, Intercultural Strategy, Socio-Economic Inequality, Problems and consequences of inequality, United Nations, Human advancement, Rousseau, Corruption, Governance, Karl Marx, Keynes, Amartya Sen, Globalization, LGBTQ+, World Trade Organization, WHO, Culture, Dynamics, Refugees, Human Rights.

River Publishers Series in Chemical and Environmental Engineering

Strategic Management of Sustainable Urban Development

Economic Downturns, Metropolitan Governance and Local Communities

Authors:

Sabato Vinci, University of Roma Tre, Italy

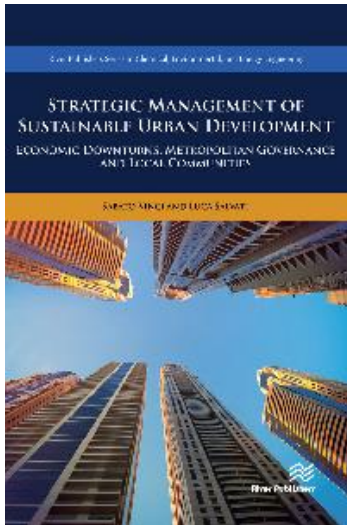
Luca Salvati, University of Macerata, Italy

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Available From: December 2020

Price: € 95.00



Description:

If we assume recession as being the starting point for policy challenges, then we can interpret these economic downturns as opportunities for change and the reshaping of society, landscapes and the latent mechanisms of growth. This book illustrates different aspects of local strategic development introducing a novel interpretation of the intimate relationship between demographic and economic aspects in complex socio-environmental systems. A specific approach investigating the mechanisms of local development, cultural and environmental values within a strategic territorial vision, is proposed. Coming from and appealing to diverse academic backgrounds, our book address paradigmatic visions about regional and urban dynamics, focusing on landscape transformations and socioeconomic disparities.

Technical topics discussed in the book include:

- Urban management;
- Metropolitan governance;
- Landscape;
- Spatial planning;
- Applied economics;
- Regional demography.

Keywords: Crisis, Urban economics, Europe, Mediterranean basin, resilience

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Getting the Climate Science Facts Right: The Role of the IPCC

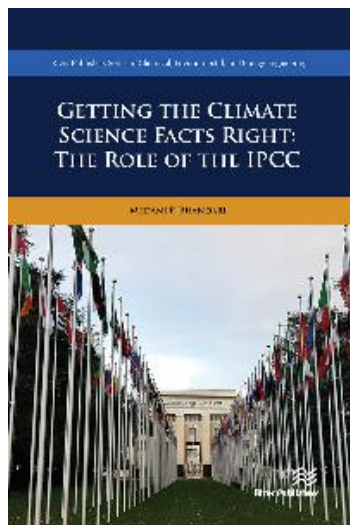
Author: Medani P. Bhandari, Akamai University, USA; Sumy State University, Ukraine

ISBN: 9788770221863

e-ISBN: 9788770221856

Available From: November 2020

Price: € 95.00



Description:

Getting the Climate Science Facts Right - discusses climate change science with reference to the Intergovernmental Panel on Climate Change (IPCC). Addressing climate change is the most important public priority of the 21st Century. Unlike many issues, however, this issue is being driven by both science and its interface with politics. The main institution for bridging this division between science and international politics is the IPCC. As such it is the main source of the facts from which climate change policy is developed. This book describes the ways in which the IPCC arrives at these facts and so can be sure they are complete and evidence based.

Seldom in history has science had such a direct relationship with politics. The negotiation of an international policy regime requires, at its outset, an agreement on the facts. In this case, the facts are scientific, complex and contentious. Governments have recognized this and have, by using the IPCC, set up institutional machinery to provide facts from a source and in a manner that they can accept. The way in which the IPCC functions is unique in that it melds the way in which science achieves consensus with the way governments do at the international level. Starting with a process to examine, review and debate scientific findings leading to a consensus about scientific fact, usually expressed as probabilities that the findings will hold over time, the IPCC then concludes by using the kind of consensus-development mechanism that the United Nations typically uses to achieve agreements leading to the formation of policy regimes.

The book examines the structure of the IPCC, its composition and its procedures in order to achieve an understanding of its role and future. This book addresses how climate change science was developed; how climate change impacts have been analyzed by various scholars, agencies, and other stakeholders; what roles international, nongovernmental and governmental organizations play in addressing climate change issues. The book incorporates climate change deniers' arguments and counter arguments. It also does not shy away from some problematic results (for example the immature data interpretation of IPCC, particularly in its 2007 report). Finally, the book also presents a case study of climate change impacts, including air, water and soil pollution, in major South Asian cities.

Keywords: United Nations; The IPCC; Role of Science in Managing Climate Change; United Nations Framework Convention on Climate Change; International Regime; Institutional Machinery; Organizational Change; Global Warming; Assessment Report; Equilibrium; Economic Victims; Environmental Hazards; Ecosystems; Human Civilization; Bashudaivakutumbakkam; Environmental Disasters; Controversy Among Scientists; Consequences of Warming; Domestic Politics; International Relations; The United Nations Environment Programme (UNEP); Meteorological Organization (WMO); United Nations General Assembly; UNFCCC; Scientific Knowledge; Problematic Correspondences; Climate Change Sceptics

River Publishers Series in Chemical and Environmental Engineering

Green Web-II: Standards and Perspectives from the IUCN Program/ Policy Development in Environment Conservation Domain

with reference to India, Pakistan, Nepal, and Bangladesh: Second Edition

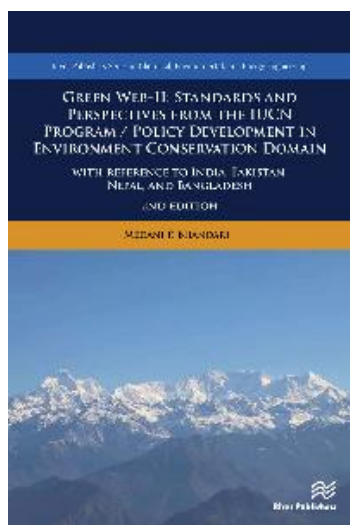
Author: Medani P. Bhandari, Akamai University, Hawaii, USA and Sumy State University, Ukraine

ISBN: 9788770221924

e-ISBN: 9788770221917

Available From: July 2020

Price: € 95.00



Description:

This second edition of the book, "Green Web-II: Standards and Perspectives from the IUCN Program / Policy Development in Environment Conservation Domain- with reference to India, Pakistan, Nepal, and Bangladesh" investigates the IUCN's role in global biodiversity conservation policy as well as in national program development in India, Pakistan, Nepal and Bangladesh. It explores how nature protection priorities and approaches are promoted or addressed by IUCN, and how environment conservation policies are created and maintained in states of South Asia with different capacities. It also evaluates IUCN's competency in biodiversity, climate change, nature conservation and environmental policy formulation at the global, regional and country levels. This book adds to our knowledge firstly by contributing to a small but growing body of work on the sociology of international organizations. International Governmental Organizations (IGOs), have previously been mainly the subject of political science. Secondly, it critically explores one of the largest and most active nature conservation organizations in the world. Thirdly, it also explores how IUCN actually goes about building protectoral programs with individual member nations. Finally, the research also shows the historical development of global institutions and IUCN's activities with member nations in helping to define or redefine the concept of global governance. The outcomes of this research will also be beneficial for global collaboration, networking, and for the identification of common concerns among the many environmental and conservational organizations at the international and national level. In this broader sense, the research outcomes might be beneficial to constituencies of the global North as well as global South because of the nature and coverage of IUCN and its role in conservation policy formation. This effort may serve as a model for additional research on international organizations.

Technical topics discussed in the book include:

- The Motivation for Environmental Conservation- How personal efforts make a difference
- The Role of International Environment Conservation Organizations
- The Political Economy of Organizations, Network theory, Institutional theory, Stakeholder theory, Governance theory
- Governance performance and Competitiveness
- Popularity indices
- Knowledge creation and diffusion
- Conservation commons

Keywords: IUCN, Environment Conservation, Conservation Strategy, Resolution formation and implementation, Sustainable Development, Biodiversity -Forest Conservation, Park Management, Environmental Governance, Conservation Commissions, India, Nepal, Bangladesh and Pakistan, Climate Change- Problems and consequences

River Publishers Series in Chemical and Environmental Engineering

Reducing Inequalities Towards Sustainable Development Goals: Multilevel Approach

Editors:

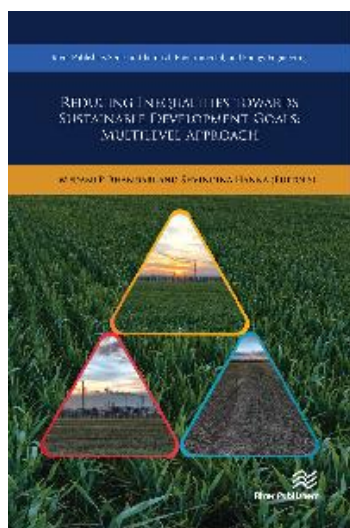
Medani P. Bhandari, Akamai University, Hawaii, USA; Sumy State University, Ukraine
Shvindina Hanna, Sumy State University, Ukraine

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Available From: December 2019

Price: € 95.00



Description:

The Sustainable Development Goals (SDGs) are a set of global goals that meet some of the most pressing challenges facing our world today. Goal 10 concerns reducing global inequalities. Inequality is currently seen in the social, political, and economic structures of communities at both the national and international level. The United Nations' approach to sustainable development is to create a set of goals and targets try to minimize the accelerating gaps of inequality. The book presents new insights for evaluating the progress on SDGs (especially goal 10), it also boldly sets new economic, social and environmental targets for reducing inequality. Using case studies, this book encourages readers to view economic development through the lens of growing inequalities and disparities. Such inequalities are clearly becoming more obvious as the world is better connected, and information is quickly shared. The books main aim is therefore to direct the efforts of scholars, practitioners and policymakers to swiftly find the balance between the three pillars of sustainable development. The main challenges and focus of each chapter are different and collectively they give an integrated understanding of the phenomenon of sustainable development and its diverse aspects. This book will be useful for policymakers, social and environmental activists, agencies, educators and practitioners in the sphere of social or environmental economics. The methodology of the research can be replicated and taken forward by future researchers in the field.

Keywords: Inequality, Sustainable Development Goals, Development Theory, Social Justice Theory, Dominance Theory, Gini Coefficient, Labor Inequality, Economic Growth, Regional Disparities, Green Investments, Economic Instrument, Public Institutions, Good Governance, Venture Financing, Innovative Enterprises, Globalization, National Economy, Energy Development, Social Responsibility, Motivational Tool, Decision-Making, 4th Industrial Revolution

River Publishers Series in Chemical and Environmental Engineering

Biotechnology for Treatment of Wastes Containing Metals

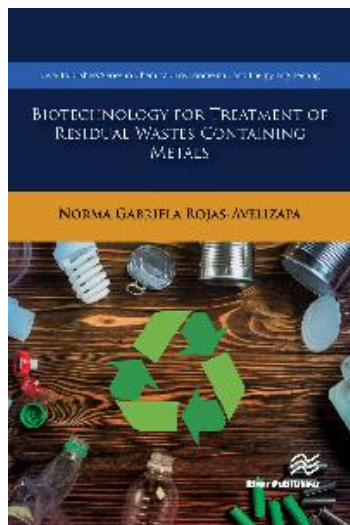
Editor: Norma G. Rojas Avelizapa, Instituto Politecnico Nacional, Mexico

ISBN: 9788770221146

e-ISBN: 9788770221139

Available From: September 2019

Price: € 95.00



Description:

Biotechnology for Treatment of Wastes Containing Metals addresses various aspects related to different wastes that have a metallic content and represent a serious risk for the environment and human health. These wastes, due to their physical and chemical characteristics, have been the object of studies which have led to the development of different technologies in recycling, reuse or adequate disposal, biotechnology being one of these alternatives. Biotechnology offers a range of options for the treatment of types of waste using microorganisms, biomass and their by-products. The mechanisms involved in these waste treatment processes are diverse and complex, and its optimization and efficiency is multifactorial.

This text contains nine chapters related to the problem of the metal contamination in the environment as well as some of the different biotechnological alternatives that have been applied for the reduction and/or recovery of metal contamination.

Keywords: Metals, Environmental impacts, Solid wastes, Biotreatment, Industrial biotechnology, Mining industry, Mechanic industrial wastes, Metal resistance genes, Bioweathering, Basidiomycetes, Recovery of metals, Environmental pollution, Bioremediation strategies, Cadmium residues

River Publishers Series in Chemical and Environmental Engineering

Veins of the Desert **A Review on Qanat / Falaj / Karez**

Authors:

Ali Asghar Semsar Yazdi, UNESCO-ICQHS

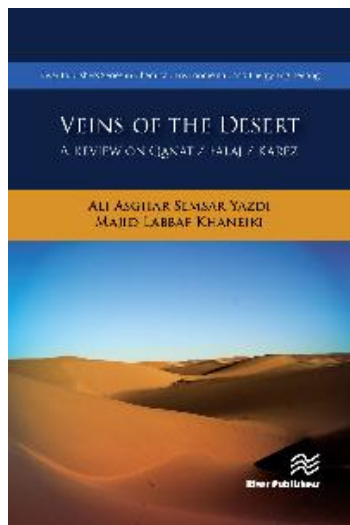
Majid Labbaf Khaneiki, UNESCO-ICQHS

ISBN: 9788770220842

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Available From: May 2019

Price: € 80.00



Description:

Qanat is a gently sloping subterranean canal, which taps a water-bearing zone at a higher elevation than cultivated lands. A qanat consist of a series of vertical shafts in sloping ground, interconnected at the bottom by a tunnel with a gradient flatter than that of the ground. From the air, this system looks like a line of anthills leading from the foothills across the desert to the greenery of an irrigated settlement. Qanat engages a variety of knowledge and its studying entails an interdisciplinary approach. In a traditional realm, qanats are embraced by a socio-economic system which guarantees their sustainability.

The facets of this socio-economic system operate closely together and make it possible for the qanats to remain into future.

Veins of the Desert shows that digging a qanat requires a variety of sciences and technologies, though at a glance qanat is just a horizontal tunnel which drains out groundwater. Qanat is a feat of technology left from our ancestors; hidden underground, but its technical importance is apparent, not less valuable than such surface structures as bridges, castles, towers, etc. Qanat enjoys extended structures and sometimes its length reaches tens of kilometers. It passes through geological formations and faces different conditions and obstacles, so the qanat masters' efforts to solve these problems led to the accumulation of knowledge in terms of qanat construction over time, which has been handed down from generation to generation. Qanat is one of the most complicated traditional technologies, which require knowledge on nature ranging from groundwater to management. This indigenous technology used to bring water efficiently from tens of kilometers away to the thirsty lands.

This book also gives insight into cultural and social heritages, which have crystalized around this technique. This cultural heritage still influences social life of the people living in such regions as central plateau of Iran where qanat has been the only means of supplying water. This technology is the focal point of the genesis of a particular civilization in the arid and semi-arid regions of Iran. The harsh environment drove those people to invent the technology of qanat and the know-how revolving around it. Qanat carries a tradition of science and technology which used to be practiced in order to overcome the technical obstacles in qanat construction. Thus, qanat is not only an irrigational means, but it should be seen as a technical and cultural legacy which deserves more attention. This book is a small encyclopedia on qanat system, providing the readers with easy answers to their questions about different aspects of this ancient technology.

Keywords: Qanat, water history, traditional irrigation, hydraulic civilization, traditional water knowledge, indigenous water technology, groundwater mining, indigenous water management

River Publishers Series in Chemical and Environmental Engineering

Re-Use and Recycling of Materials

Solid Waste Management and Water Treatment

Editors:

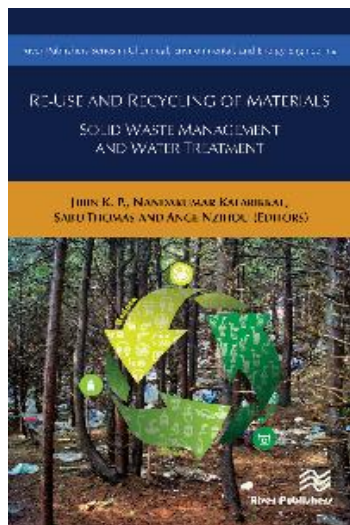
Jibin K. P., Mahatma Gandhi University, India
Nandakumar Kalarikkal, Mahatma Gandhi University, India
Sabu Thomas, Mahatma Gandhi University, India
Ange Nzihou, IMT Mines Albi CNRS, France

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Price: € 95.00



Description:

In recent years, a considerable amount of effort has been devoted, both in industry and academia, towards the recycling and reuse of materials. Most nations are now trying to reduce the amount of waste materials, through the proper recycling of materials.

Re-Use and Recycling of Materials will help readers to understand the current status in the field of waste management, as well as what research is taking place to deal with such issues.

Technical topics discussed in the book include:

- Municipal solid waste management
- Recycling of WEEE
- Waste to industrially important product like lignin and cellulose
- Recycling of agriculture waste
- Polymer and plastic recycling

Keywords: Waste water treatment, WEEE recycling, Lignin, Cellulose, Air pollution, Solid waste, Agro waste

River Publishers Series in Chemical and Environmental Engineering

Coiled Tubing and Other Stimulation Techniques **Formation Damage, Well Stimulation Techniques for Production Enhancement**

Authors:

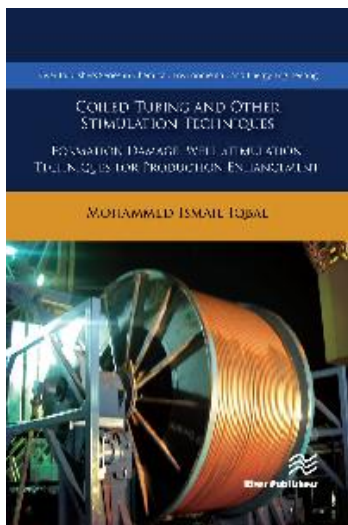
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Description:

Good engineers never stop looking for opportunities to improve the performance of their production systems. Performance enhancement methods are always carefully examined, and production data is analyzed in order to identify determining factors affecting performance.

The two main activities of the production engineer in the petroleum and related industries are reservoir stimulation and artificial lift. The classic solution to maximizing a well's productivity is to stimulate it. The basis for selecting stimulation candidates should be a review of the well's actual and theoretical IPR. Low permeability wells often need fracturing on initial completion. In low permeability zones, additional post stimulation production can be significant to the economics, however, the production engineer needs to make management aware of the true long term potential or else overly optimistic projections can easily be made.

The main purpose of stimulation is to enhance the property value by the faster delivery of the petroleum fluid and/or to increase ultimate economic recovery. The aim of reservoir stimulation is to bypass near-wellbore damage and return a well to its "natural" productivity / injectivity, to extend a conductive path deep into a formation and thus increase productivity beyond the natural level and to produce hydrocarbon from tight formation.

The importance of reservoir stimulation is increasing due to following reasons:

- Hydrocarbon fields in their mid-life
- Production in these fields are in declining trend
- The thrust area: Enhancement of production

Hence, to improve productivity of the well matrix stimulation and hydraulic fracturing are intended to remedy, or even improve, the natural connection of the wellbore with the reservoir, which could delay the need for artificial lift.

This book presents procedures taken in the Oil & Gas Industry for identifying well problems, and it suggests means of solving problems with the help of the Coil Tube unit which is used for improving well productivity and techniques like Acidizing and Hydraulic Fracturing.

Keywords: Acidization, Fracturing, Production, Coil Tube Unit, Porosity, Permeability, Formation Damage, Skin, Proppants

River Publishers Series in Chemical and Environmental Engineering

Dew Water

Author: Daniel Beysens, ESPCI and OPUR, France

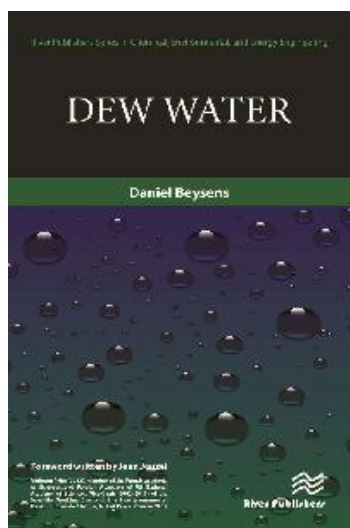
Foreword by: J. Jouzel, former IPCC Vice-President

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Description:

The world's ever-increasing need for fresh water has led to the use of non-conventional sources such as rain and fog water collection. Although rain water collection is relatively simple, the supply is often erratic. Passive fog water collection has been used in several parts of the world but is only relevant to certain geographical locations. Dew occurrence, however, is far more widespread, can form in most climates and geographic settings, show high frequency and prevalence throughout the year. During the past 20 years, dew collection has therefore been investigated as a serious supplemental source of fresh water. *Dew Water* offers a thorough review of dew, its formation characteristics and potential for dew collection, for audiences that include policy-makers, non-governmental organizations involved in development aid and sustainable development, engineers, urban planners, researchers and students.

After providing a background on atmospheric water, humid air, and sky and materials emissivity, the book deals with dew formation and its estimation with a focus on the use of meteorological data. Dew measurement techniques are reviewed and discussed as well as dew collection by passive means. Computational fluid dynamics technique is described for better design of dew collectors. Dew quality (chemistry, biology) is assessed in view of potable water quality. Costs and economic aspects are also considered.

Winner of the Atmospheric Science Librarians International (ASLI) 2018 CHOICE Honorable Mention Award

Keywords: Dew, dew water, sky emissivity, materials emissivity, passive cooling, dew formation, dew collection, computational fluid dynamics, dew chemistry, dew biology, dew economics.

River Publishers Series in Chemical and Environmental Engineering

Green Web-II: Standards and Perspectives from the IUCN Program and Policy Development in Environment Conservation Domain: A Comparative Study of India, Pakistan, Nepal, and Bangladesh

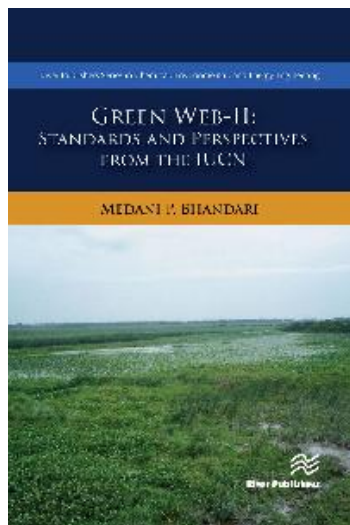
Author: Medani P. Bhandari, Akamai University, Hawaii, USA and Sumy State University, Ukraine

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Description:

In dealing with the IUCN, one must bear in mind that there never has been, and undoubtedly never will be, any other organization even remotely resembling it. Its peculiarities, subtleties and complexities are sometimes mind-boggling (Nicholson 1990 in Holdgate 1999: ix).

Green Web-II investigates IUCN's role in global biodiversity conservation policy as well as in national program development in India, Pakistan, Nepal and Bangladesh. It explores how nature protection priorities and approaches are promoted or addressed by IUCN, an international organization, and how environment conservation policies are created and maintained in states with different capacities of South Asia. It also evaluates IUCN's competency in bio-diversity, climate change, nature conservation and environmental policy formulation at global, regional and country level. This study is the first detailed scholarly study on the IUCN as an organization as well as on its efforts in biodiversity conservation.

This book adds to our knowledge, firstly by contributing to a small but growing body of work on the sociology of international organizations. IOs, especially International Governmental Organizations (IGOs), have long been the subject of mostly political science. Secondly, it applies a fuller sociological imagination to the study of IOs by critically exploring one of the largest and most active nature conservation organizations in the world. Thirdly, it also explores how the IUCN actually goes about building protectoral programs with individual member nations.

Additionally, the book explores the recent development of the green economy (GE) concepts into IUCN's program planning today. The green economy initiative applies a people-first approach. Although the concept is relatively new, this research explores the theoretical development of a green economy and illustrates how this theory is applied in IUCN's program planning to program implementation.

Technical topics discussed in the book include:

- Motivation of Environment Conservation - How personal efforts make difference
- Role of International Environment Conservation Organizations
- Political Economy of Organizations, Network theory, Institutional theory, Stakeholder theory, Governance theory
- Governance performances and Competitiveness
- Popularity indices
- Knowledge creation and diffusion
- Conservation commons

Keywords: IUCN, environment conservation, conservation strategy, resolution formation and implementation, sustainable development, biodiversity - forest conservation, park management, environmental governance, conservation commissions, climate change - problems and consequences

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River Publishers Series in Chemical and Environmental Engineering

A Multidisciplinary Introduction to Desalination

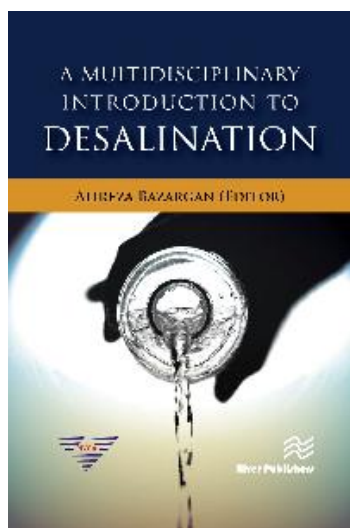
Editor: Alireza Bazargan, Head of Research and Development, NVCo, Iran

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Description:

Although more than 70% of the globe is covered with water, only a small portion is suitable for direct human use, making the scarcity of freshwater one of our planet's most serious challenges. In this context "desalination", defined as "the removal of salt from water", is one of the possible solutions for overcoming our planet's municipal and industrial thirst.

By drawing upon the authoritative expertise of a remarkable team of international authors, this book aims to provide an encompassing and "multidisciplinary" introduction to various aspects of desalination. The forte of this publication is that it does not overtly focus on a particular sub-topic of desalination, but rather addresses the topic as a whole. In other words, the unique assortment of reader-friendly chapters is designed to strike a delicate balance between the technical and non-technical.

The book is divided into five general sections:

- The first section presents an overview of water scarcity, followed by a review of integrated water management and the alternatives to desalination. The fundamentals of desalination are provided, including simple water chemistry;
- The second section covers the conventional technologies of today, including thermal and membrane desalination processes. The topics of pre- and post- treatment are given due credit, as no desalination plant can operate without them;
- The third section reviews the history of how desalination technologies originated, including a review of today's R&D activities and cutting edge research. The processes and engineering applied for membrane manufacturing are also presented;
- Section four is concerned with energy and environmental issues, including the application of renewable and nuclear energy, minimization of energy usage and the water-energy-nexus, brine management, and environmental impacts;
- Finally, section five covers the social and commercial issues, ranging from rural desalination, to the politics of desalination. Desalination costs and feasibility are presented, as well as issues in business development and the future market prospects.

Effectively, *A Multidisciplinary Introduction to Desalination* aims to be a holistic go-to-compendium for anyone seeking a balanced understanding of the various facets of desalination

Keywords: Water scarcity; integrated water management; desalination; thermal desalination; multi-stage flash; multi effect distillation; thermal vapour compression; membrane desalination; reverse osmosis; forward osmosis; electro dialysis reversal; history of desalination; research and development; water energy nexus, energy minimization and recovery; brine management; rural desalination; cost and feasibility analysis; market survey; business development; future prospects.

River Publishers Series in Chemical and Environmental Engineering

Hydrogen in an International Context: Vulnerabilities of Hydrogen Energy in Emerging Markets

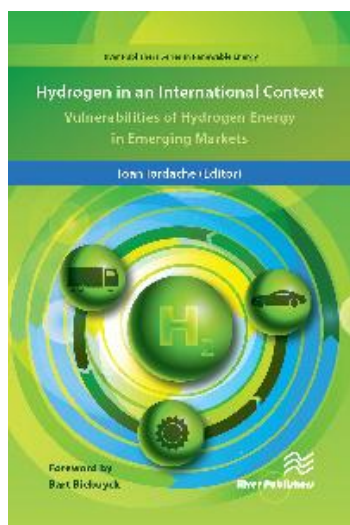
Editor: Ioan Iordache, Romanian Association for Hydrogen Energy, Romania

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Available From: November 2016

Price: € 80.00



Description:

Hydrogen in an International Context: Vulnerabilities of Hydrogen Energy in Emerging Markets describes strategies and developments for hydrogen civilization efforts realised by various stakeholders such as authorities, institutes, research, industry, and individuals, in different countries and at different stages of the development cycle. Through their contributions, the chapter authors in this book propose a new approach to actual and relevant topics of interest, generically called the hydrogen economy and civilization.

Hydrogen vulnerabilities is a topic that includes new challenges that face the hydrogen energy market. Weaknesses for the hydrogen stakeholder are becoming more refined, and it is necessary to be an active and sensitive player to understand these. A prosperous development of hydrogen will require the assimilation of numerous, diverse and unfamiliar contexts. Challenges for hydrogen will not only be in scientific, technical, economical or public acceptance, but challenges also lie in the genesis of this topic and the neglect of some aspects, however marginal, which negatively influence the desired hydrogen developed.

This book informs the reader about the status of hydrogen energy in the international market, and it includes a series of examples and case studies about hydrogen activities in various countries. Thus, due to the synergy of this library of contexts, the reader should be able to reach a level of intuition enabling them to see the strengths and weaknesses of hydrogen.

Keywords: Hydrogen Civilization, Hydrogen Development, Hydrogen in the international market, Hydrogen Energy Development, Hydrogen Vulnerabilities, Renewable Energy, Fuel Cells.

River Publishers Series in Chemical and Environmental Engineering

Renewable Energy; a Status Quo

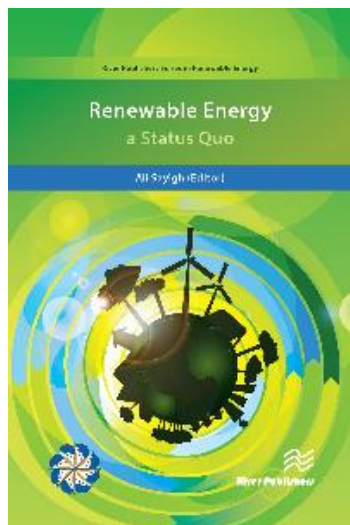
Author: Ali Sayigh, Director General of World Renewable Energy Network (WREN), UK

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Description:

It is evident to all that climate change is happening - the results can be seen in many countries. Floods, freaks storms, wind speeds of more than 80 mph, heat waves, droughts, rising sea levels and disappearing glaciers, largely due to excessive use of fossil fuels.

Climate change acceleration began slowly in the 1970s but has now increased beyond our ability to stop it or reduce its impact. Using renewable energy effectively on a large scale will put an end or considerably slow down this process in many parts of the world. This book shows that some countries are making greater efforts than others. Installations of the 70s and 80s were limited to kilowatts while in the 2010s we speak in terms of megawatts. The cost of most renewable energy systems have been reduced by so much that they have reached parity with fossil fuels, or are even cheaper. The most effective progress has been made in photovoltaic systems, whilst concentrated solar power, biomass, wind energy and hydro-power have greatly improved payback periods too.

While much is hoped from the outcome of the December 2015 Paris climate summit, realistically in the past very few nations honoured their pledges. A great deal of aid has been given to poor countries which are suffering from climate change, however the donor nations have failed to restrict their own carbon emissions. Many poor countries feel they are being expected to forgo the industrial benefits which came from the industrial revolution powered by fossil fuels. The book will outline the achievements of renewable energy by the end of 2015 / beginning of 2016.

Keywords: Renewable Energy, Solar Energy, Solar Power; Waste-to-Energy, Hydro-electricity; Biomass; Geo-thermal, Bio-Energy.

River Publishers Series in Chemical and Environmental Engineering

Cisterns: Sustainable Development, Architecture and Energy

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Price: € 65.00



Description:

Cisterns: Sustainable Development, Architecture and Energy was written on beliefs that based on historical evidence and actual findings, Iran is most probably the country where cisterns, or "*Aub-anbars*" in Farsi, were first developed and built. Therefore, it is quite natural for the author to name cisterns in the text *Aub-anbars*, as it has been called for centuries in this country, the translation of the same name having been used in other countries too. Although in some books, journals and papers published out of Iran by foreign and Iranian scholars, the names Cistern or Water Reservoir have been used. The word *Aub-anbar* is a compound noun in Farsi; *Aub* means water and *Anbar* means *tank/reservoir*. Putting them together gives the noun *Aub-anbar* and it should be used as one word.

People of the region wanting reserved cool water whether in cities or in different locations across the harsh desert during their travel. Queen Zubeida, the wife of Khalifa Haroon Al-Rasheed in 750 AD built one of these cistern closer to the town of Hiyal in Saudi Arabia so that the Pilgrims? Caravans going to Mecca will have cool, fresh water.

This book consists of 11-chapters with full analysis, illustrations and photographs. It makes interesting readings to those interested into vernacular architecture, traditional buildings and creative thinking.

Keywords: Water Storage Systems, Energy Systems; Cisterns, Quality of Water; Cistern Architecture