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2016

# International Water Conference 2016

## Water Resource in Arid areas: The Way Forward

# Book of abstracts



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**MENA NWC**  
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## Preface

The rising demand for water associated with population growth, water-intensive diets and rising of living standards has severely stressed water resources. This is much aggravated in arid areas where natural water resources depletion attributed low precipitation and high evaporation rates. The water budget deficit in arid areas, the high cost of water supply, the essential need for food and associated energy value among other challenges all need to be scientifically addressed to find solutions to world current and future water problems. Multidisciplinary and interdisciplinary fundamental and applied scientific research from the engineering sciences, atmospheric sciences, agro-sciences, hydrology and geology is essential to help in solving water problems. Moreover, fundamental and applied social sciences are important to address institutional, policy, and management issues.

In the views of the above challenges and developments, the International Conference "Water Resources in Arid Areas: The Way Forward" is planned and organized to bring water scientists, engineers, policy makers, managers and research and governmental institutions to share the latest knowledge in water research and explore the ways in finding solutions to water crises with emphasis on the arid areas. The present "Abstract Book" contains over 300 abstracts covering a wide spectrum of water science and addresses multiple issues and techniques. Thanks to all contributors and participants.

The Conference Scientific Committee has reviewed abstracts from several countries and institutions and recommends on the basis of quality and importance the ones published in this "Abstract Book". In addition, we have received over 200 full papers to be considered for publication in the special issue " Water Resources In Arid Areas: The Way Forward" in the Arabian Journal of Geosciences (AJGS) and also published in a Springer Book. Those papers are reviewed and under review by the Editorial Board members (listed is in the next page) of the conference proceedings and their valuable contribution and time is highly appreciated. The book and the special issue will be published soon.

The reception of such large number of scientists and the organization of such large meeting is possible with the generous sponsorship of The Sultan Qaboos University, The Research Council, Ministry of Regional Municipalities and Water Resources, United Nations Economic and Social Commission for Western Asia, Haya Water and Middle East and North Africa Network for the Water Research Centers (MENA NWC). We are all indebted to our sponsors. I would like to express my deepest thanks and gratitude to the organizing committee and the supporting staff (listed in the next pages) for excellent work performed to make this Conference a successful event.



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# **GEO - SOLUTION TECHNIQUES FOR GROUNDWATER EXPLORATION**

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## **Abstract**

Groundwater has been one of the major purest sources of water in the world. This is because the source is been stored in an aquifer beneath the earth's surface. However, exploring this source require certain skills or techniques in order to ease the trauma experienced by the searcher. Over the years various geophysical techniques have been applied to explore this source but with little or no success due to the approach. In this research therefore, aeromagnetic and electrical resistivity techniques were integrated to explore this source in Dahomey basin, southwestern Nigeria. The result established that no single geophysical technique can be used for detailed geophysical studies of an area. But the combination of these geophysical techniques yields better result because they complement each other.

**Keywords:** groundwater, aquifer, geophysical technique