BOOK OF ABSTRACTS

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OVERVIEW

The International Conference on Water, Environment, Energy and Society is being organized jointly by the Institut des Regions Arides, Tunisia, AISECT University, India, and Texas A&M University, USA, from 08 to 11 May 2018 in Djerba Island, Tunisia.

The objective of the ICWEES-2018 is to integrate research, technology and practice, in the fields of Water, Environment. Energy, Sustainability, Health, Management and Society; and bring together Scientists, Academicians, Researchers, Practicing Engineers, Consultants, Planners, Policy Makers, Economists and Social Scientists, Managers, and Leaders from around the world to share their knowledge, skills, experience, and expertise through research papers, case studies, and keynote addresses on, but not limited to, water resources, climate change, ecosystems implications for human health, sustainable land use and eco-cities, integrated resources management, green economy, green energy, cleaner production, planning, disaster management, environmental management, etc. The proposed major themes of the conference will be discussed in parallel sessions to provide opportunities for the delegates from around the world to share their knowledge, skills, experiences, and expertise with focus on water, environmental, energy, and societal challenges facing our planet and the future of our generation. Environmental problems, such as desertification processes, land degradation and rehabilitation, land cover and land use change, climate change, droughts, early warning, and more, are of utmost importance in arid environments where natural resources are scarce and vulnerable.

The conference will include paper presentations describing original work on the current state of research and practices in technologies and systems for characterization, mitigation, soil, water resources, and climate change and prevention, preparation, and response and recovery of disasters. The themes include (but not limited to): water resources, land degradation and management, energy resources and use, environmental issues, related social and economic development, geo-information and space technologies, multi-sensor data collection, information dissemination, and early warning and standardization. Studies in all scales are welcome, a special emphasis will be given to large scale, watershed studies.

OBJECTIVES

- Bring together leading experts, policy makers and organizations, and share latest developments in water, soil and energy resources management under climate change
- Review modern technologies and innovative approaches to be directed in fragile regions for identification, adaptation and mitigation of climate change phenomenon.
- Strengthen exchanges and cooperation in research, development and socio-economic sector for participatory management of soil and water resources and energy

Revival of an indigenous management system in Southern Tunisia: reintroduction of the «Gdel» in private rangelands

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Abstract

To face the negative effects of human pressure and environmental changes, developing grazing management strategies is an important tool for rangeland sustainability in the dry areas. This study aimed at assessing the reintroduction under enhanced arrangements of the indigenous deferred grazing locally named as "Gdel" for the management of private rangelands in southern Tunisia. Under the framework of the IFAD funded project "PRODESUD" and in collaboration with the Office of Pasture and Livestock, 6 rangeland sites subjected respectively to 1 year, 2 years, 3 years rest, 2 sites under light grazing after rest and free grazing (control) were selected in a representative pastoral community of Southern Tunisia. Total plant cover, range production and carrying capacity were determined inside and outside the rested sites. Preliminary findings indicate that two years rest have recorded the highest values for all scored parameters. This was followed by the first-year grazing. The freely grazed site (control) had the lowest values as compared to all other management modes. Perennials are the most dominant in all treatments including the control, but they have the highest cover in the 2nd year rested rangelands. Two years rest constitutes an entirely positive influence and provides three times more forage than three-year rest. Under the three years protection, rest is unlikely to achieve any notable benefits. Two years rest followed by one year grazing is an efficient tool to maintain sustainability of rangelands. Based on these findings, rest-rotation grazing or alternation of short periods of grazing with periods of vegetative rest seems to be more favorable than strict or long-term protection. Such grazing management would be recommended for restoring the degraded rangelands