Strategies for rationalization and saving of sweet water and its exploitation in the generation of energy in the Arab desert environment in view of the industrial design innovations

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Abstract

The large area of the Arab homeland from the Arabian Gulf to the Atlantic Ocean is the world's largest desert space. Consequently, Multiple environments appear in the Arab countries with different its resources and their living requirements. According to The desert environment suffers from the scarcity of sweet water and the scarcity of rain, for this puts scientific research on further research efforts to provide sweet water and rationalize its consumption at the same time, Where today the fears of the depletion of fresh water, even in the countries with rivers of the great problems confrontation by most countries of the world and not only Arab societies.

The problem of sweet water in Arab societies refer to many factors, including population growth, misuse of sweet water or lack of a culture of water conservation in these communities, this is in addition to the delay of the applied strategies for the rationing and rationalization of sweet water due to economic problems and not to put them on the priorities of attention since the previous decades.

And the emergence of water research to support and develop industrial technology for water desalination, groundwater extraction, wastewater treatment, and utilization of water flow in energy generation, as a research efforts to provide sweet water in the desert environment, it has become the responsibility of industrial innovations (industrial design) a key role in the design and development of innovations that meet the needs and requirements of the Arab desert environment by provide and rationalize the sweet water and rationing its uses in different purposes, including the following:

1- Innovations for the collection of rainwater and exploitation it in the irrigation of agricultural land and its use in human needs.
2- Innovations of irrigation techniques and drip irrigation in agriculture.
3- Innovations to rationalize water consumption in homes (water consumption by calculated rates).
4- Exploitation the heat of the Cooking stove in home to provide hot water.
5- Benefit of the flow of water to generate ener

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