

## **Water Desalination Using Solar Energy in Jordan**

Water is considered as a vital substance for survival on this planet. Jordan is a country in the Middle East located in semiarid to arid region. The annual rainfall averages are declining due to climate change. The quality of water in Jordan is also suffering in quality due to pollution. The population in Jordan is growing rapidly representing higher demand on water resources to support growth in industrial and agricultural assets.

In addition, the shortage of water resources has become the misfortune of public sector as well as private sector in arid and semiarid regions such as Jordan; these regions face the attack of desertification due to the absence and decline in rainfall due to climate change. Jordan depends on classical resources involving surface water and groundwater. Moreover, options such as reuse, desalination, and water pulling have become necessary for Jordan.

Jordan is highly dependent on surface and groundwater to meet its demand on fresh drinking water. The available quantities in both surface and underground water are far less than the amounts needed to meet the needs of the progressively growing population in Jordan. Therefore, the country is currently considering alternate sources of water including brackish water and desalination of seawater. These resources require sophisticated techniques and equipment.

Solar energy is abundant in Jordan and can be used in water desalination. This paper will look in depth on the feasibility of such use in Jordan to meet the demand of its population. This process of getting wholesome water will be governed by applicable national and international standards.