

Many countries and regions around the world are facing a continuously growing pressure on their limited freshwater resources, particularly those under hot and arid climates. Higher water demand than availability led to over-abstraction and deterioration of the available freshwater resources' quality. In this context, wastewater, if properly treated, can represent a new water source added in the local water balance, particularly in regions of Colorado, California, Australia, China and in the wide region of the Middle East, which is characterized as one of most water-stressed regions in the world. This article summarizes the status of wastewater treatment and management in the Middle East and discusses the challenges, the various barriers and also the opportunities that arise by introducing the sustainable technology of Constructed Wetlands in the region. Furthermore, the aim of the paper is to provide a better insight into the possibility and feasibility of a wider implementation of this green technology under the hot and arid climate of Middle East by presenting several successful case studies of operating Constructed Wetlands facilities in the region for the treatment of various wastewater sources.