

ABSTRACT

The scope of this report includes an innovative water desalination device design using renewable energy sources. The project entails the design of a solar powered desalination device which works using evaporation. During this project it is shown that it is possible to produce freshwater with state of the art technologies by using a solar desalination system. Solar energy can be tapped in a lot of areas to produce enough thermal heat to operate an evaporation desalination unit, which produces high-quality freshwater.

Such technologies have been utilised in Europe and recently in Egypt. It has yet to be used in Kenya, especially in the coastal region, where there is freshwater shortage. The use of solar energy alleviates the costs of using electricity and/or fuels to run the device and is environmentally friendly. The quality is high enough for daily life in private homes and for agriculture. If it should be used as drinking water it has to be accumulated with trace elements.