## **Desalination by country**



Desalination by country

Desalination by country. There are approximately 16,000 operational desalination plants, located across 177 countries, which generate an estimated 95 million m 3 /day of fresh water. [1] Micro desalination plants operate near almost every natural gas or fracking facility in the United States.

There are over 16,000 desalination plants in 177 countries. Many are micro plants, especially used to create cleaner water used for fracking in oil extraction. Here is a list of large operating desalination plants that have a daily capacity of 100,000 cubic meters per day or are the largest plant in a particular country.

Saudi Arabia leads the globe in the production of desalinated water with a daily production capacity of 117 million cubic feet. The country has 27 desalination plants spread along the country's coastline with 21 located along the Red Sea and six located on the East Coast.

The global spread of desalination is examined by computing the desalination capacities in world"s regions, and by evaluating the rising trend of desalination capacity in Africa and Europe, desalination capacities of industries across the globe, desalination capacities of industries by region, desalinated water capacities owned by government ...

During 2022, approximately 53.3 percent of the global desalination capacity were located in the Middle East. The largest desalination project in the Middle East and North Africa (MENA) region...

Desalination is a technique used to filter water that contains salt and convert it into more usable water or refined for potable (drinkable) water. There are over 16,000 desalination plants in 177 countries. Many are micro plants, especially used to create cleaner water used for fracking in oil extraction.

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Desalination is the process of purifying saline water to make it fit for human consumption. Of all the water on earth, 97.5% of it is saltwater with only 2.5% being fresh water. However, over two-thirds of the fresh water is trapped in glaciers and ice caps in the polar regions of the globe which leaves only 0.83% of the total water on earth being accessible clean water. While some countries have the privilege of having many lakes and rivers within their border (such as Canada), others are not as lucky and can only rely on desalinating marine water to cater for their local water demands. Desalination occurs through two primary processes of distillation and reverses osmosis.

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along the Red Sea and six located on the East Coast. The desalination facilities employ two different desalination processes with seven plants using the multi-effect distillation process, eight plants using the reverse osmosis technology and 12 using the multi-stage distillation process. The country has the largest floating desalination plant in the world with a capacity of producing up to 882,867 cubic feet.

The United Arab Emirates is a desert nation which has extremely scarce fresh water resources and a fresh water per capita demand of 650 liters per day. The UAE's primary source of fresh water is aquifers. However, the water from most of the aquifers is saline, with some having up to eight times more salinity than seawater. This means it is not fit for human consumption. Therefore, the Abu Dhabi-based government has heavily invested in desalination of sea water and has established eight desalination plants in the Gulf state at the cost of over \$3.2 billion. These desalination plants are run by a government foreign investor partnership.

Improvements in technologies are pushing down the operating costs of desalination plants with studies being conducted to assess the viability of using solar energy to power the desalination plants. Desalination is expected to grow in the future as the growing population in the Middle East will cause an increase in the demand for fresh water.

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