

# Freshwater Cane

Global warming, climate changes and mismanagement have created unbearable water crises in a wide area of Iran's plateau. Drying the rivers, lakes and agricultural fields and subsequently permanent dust storms, have been caused regional conflicts to exploit water resources.

“Freshwater Cane” system is a combination of “Solar updraft tower” and “Solar humidification” systems which Purify the sea water of the Persian Gulf and Oman Sea into fresh water in a sustainable and inexpensive way and transferring it to the highlands of Iran's plateau.

These are the main parts of the system:

A: Green house effect area and sea water pool

B: Chimney or updraft tower

C: Electric turbine

D: Steam condenser

The lower part of the device at the sea level is a black circular pool with conical shape glass ceiling filled with sea water. Greenhouse effect by great heat of the sun on the southern shores of Iran steams water and along with hot air flows to the top of the cone where a pipe drives it upwards like a chimney.

There is a turbine's rotor at the connection of the chimney and the cone's head where has the highest airflow rate. By actuating the rotor, the generator can provide the electrical energy for the condensers. the vapor of the air when it reaches the top of the chimney, is distilled by the condenser and in result we will have freshwater.

