

# WATER DESALINATION PLANTS HARM ENVIRONMENT: UN

Relevant for: Geography | Topic: Important Geophysical Phenomenon - Tides, Oceanic Circulation and Ocean Bottom Relief

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Almost 16,000 desalination plants worldwide produce bigger-than-expected flows of highly salty waste water and toxic chemicals that are damaging the environment, a U.N.-backed study said on Monday.

Desalination plants pump out 142 million cubic metres of salty brine every day, 50% more than previous estimates, to produce 95 million cubic metres of fresh water, the study said.

About 55% of the brine is produced in desalination plants processing seawater in Saudi Arabia, the United Arab Emirates and Qatar, according to the study by the U.N. University's Canadian-based Institute for Water, Environment and Health (UNU-INWEH).

The hyper-salty water is mostly pumped into the sea and, over a year, would be enough to cover the U.S. state of Florida with 1 foot of brine, it said of the fast-growing and energy-intensive technology that benefits many arid regions.

Brine, water comprising about 5% salt, often includes toxins such as chlorine and copper used in desalination, it said. By contrast, global sea water is about 3.5% salt.

Waste chemicals "accumulate in the environment and can have toxic effects in fish", said Edward Jones, the lead author.

Brine can cut levels of oxygen in seawater near desalination plants with "profound impacts" on shellfish, crabs and other creatures on the seabed, leading to "ecological effects observable throughout the food chain", he said.

Vladimir Smakhtin, director of UNU-INWEH, said the study was part of research into how best to secure fresh water for a rising population without harming the environment.

"There are all sorts of under-appreciated sources of water," he said, ranging from fog harvesting to aquifers below the seabed. The study also involved the Gwangju Institute of Science and Technology in South Korea.

Uttarakhand High Court dismissed a case filed by Baba Ramdev's Divya Pharmacy that pleaded against sharing revenues from indigenous biological resources with local communities

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