Saudi thirst for water is creating a toxic brine problem

Notes & Cues:

Article:

Saudi Arabia isn't just the world's top crude oil exporter. It's also the biggest producer of a toxic effluent that's the byproduct of slaking the desert kingdom's thirst for water.

United Nations scientists warned that desalination is creating huge volumes of chemical-laced brine that risks contaminating food chains if left untreated. The problem is most acute in the Middle East and North Africa, which account for two-thirds of the world's water contaminated by energy-intensive desalination plants.

Desalination is an industrial process that uses heat and pressure to make seawater fit for human consumption. For every liter of potable water produced, the UN estimates about 1.5 liters of liquid polluted with chlorine and copper are created. When pumped back into the ocean, the toxic brine depletes oxygen and impacts organisms along the food chain.

Saudi Arabia's desalination plants produce about 31.5 million cubic meters of contaminated water each day. That volume of liquid is equivalent to about 20 million barrels of oil a day, or, double the amount of crude it currently produces. The Kingdom is tendering seven desalination projects as it tries to alleviate the impacts of depleted aquifers.

Other countries have successfully used the brine to cultivate forage shrubs, though at the cost of land salinization. "There is a need to translate such research and convert an environmental problem into an economic opportunity, " said Manzoor Qadir, the UN institute's assistant director. "This is particularly important in countries producing large volumes of brine with relatively low efficiencies, such as Saudi Arabia, U.A.E., Kuwait and Qatar."

Summary: