Parched Emirates relies on sea as groundwater runs out

November 24 2015, byJon Gambrell

A laborer walks past piping at a desalination test facility on the outskirts of Abu Dhabi, United Arab Emirates, on Monday, Nov. 23, 2015. Authorities took journalists on a tour of the facility to show ways the United Arab Emirates, which relies heavily on desalinated seawater for its drinking water, is trying to make the process more environmentally friendly. (AP Photo/Jon Gambrell)

As skyscrapers and gleaming towers rose with lightning speed across the United Arab Emirates over the past two decades, the Gulf nation's thirst

for water grew at an enormous rate—so much so that today, it threatens to dry up all of the country's groundwater in as little as 15 years, experts say.

To quench that demand, cities across the seven emirates that make up the UAE rely on desalinated seawater to supply 98 percent of their drinking water, but that comes with a tremendous environmental and fiscal cost.

Now, officials are looking at new technologies to cover that demand, while acknowledging the risks ahead.

"In our region, water is more important than oil," said Ahmad Belhoul, the CEO of Masdar, the Abu Dhabi government's clean-energy company. "We're trying to find solutions to address that."

While the Emirates rose on its oil wealth, the riches spurred the development that strains the water supply in this desert nation. An academic paper published earlier this year by scientists at the United Arab Emirates University in Al Ain, one of the emirates, suggested the country's entire supply of groundwater could be gone by 2030.

Currently, groundwater accounts for 44 percent of all water consumption in the UAE, though much of it goes toward irrigation for farming, according to a report by the Ministry of Environment and Water. In the cities, the country's 33 desalination plants supply nearly every drop of water.

Desalination plants are nothing new across the Middle East, with Bahrain, Israel, Kuwait, Libya, Oman, Qatar and Saudi Arabia having some of the world's biggest facilities.

Waitresses prepare glasses of desalinated water for visiting dignitaries at a desalination test facility on the outskirts of Abu Dhabi, United Arab Emirates, on Monday, Nov. 23, 2015. Authorities took journalists on a tour of the facility to show ways the United Arab Emirates, which relies heavily on desalinated seawater for its drinking water, is trying to make the process more environmentally friendly. (AP Photo/Jon Gambrell)

However, the cost of building and operating the plants can run in the billions, and they also require massive amounts of energy to separate the salt from the water and purify it for consumption. The leftover heated saltwater gets discharged back into the sea, where it can affect marine life.

But even with the crisis facing the Emirates, water remains cheap and often wasted. Errant sprinklers water sidewalks in city-state Dubai, as leaking pipes pool puddles on roadways. A study this year by the United

Nations found that residents of the UAE and most of its Gulf neighbors use around 500 liters (132 gallons) of water per day—among some of the highest usage around the world.

That waste is something Belhoul himself acknowledged as a problem.

Ahmad Belhoul, the CEO of the Masdar, the Abu Dhabi government's clean-energy company, speaks at an event at a desalination test facility on the outskirts of Abu Dhabi, United Arab Emirates, on Monday, Nov. 23, 2015. Authorities took journalists on a tour of the facility to show ways the United Arab Emirates, which relies heavily on desalinated seawater for its drinking water, is trying to make the process more environmentally friendly. (AP Photo/Jon Gambrell)

"There has been some overuse of water driven by the lower tariffs," Belhoul told The Associated Press. "If you don't pass on the price to the end user, the natural behavior is to consume more water."

Beyond raising prices, officials hope new desalination techniques being tested on the outskirts of Abu Dhabi will allow solar energy to replace natural gas as an energy source, as well as make the plants smaller and cheaper to operate. On a tour Monday, they offered visiting dignitaries water produced there in crystal glasses.

After taking a sip, Sultan Ahmed al-Jaber, the UAE's minister of state, gave it his approval: "It tastes just like Evian."

Two businessmen look out at the Persian Gulf at a desalination test facility on the outskirts of Abu Dhabi, United Arab Emirates, on Monday, Nov. 23, 2015. Authorities took journalists on a tour of the facility to show ways the United

Arab Emirates, which relies heavily on desalinated seawater for its drinking water, is trying to make the process more environmentally friendly. (AP Photo/Jon Gambrell)

Ahmad Belhoul, the CEO of the Masdar, the Abu Dhabi government's clean-energy company, on the left, speaks to colleagues at an event at a desalination test facility on the outskirts of Abu Dhabi, United Arab Emirates, on Monday, Nov. 23, 2015. Authorities took journalists on a tour of the facility to show ways the United Arab Emirates, which relies heavily on desalinated seawater for its drinking water, is trying to make the process more environmentally friendly. (AP Photo/Jon Gambrell)

A laborer and two waitresses prepare glasses of desalinated water for visiting dignitaries at a desalination test facility on the outskirts of Abu Dhabi, United Arab Emirates, on Monday, Nov. 23, 2015. Authorities took journalists on a tour of the facility to show ways the United Arab Emirates, which relies heavily on desalinated seawater for its drinking water, is trying to make the process more environmentally friendly. (AP Photo/Jon Gambrell)