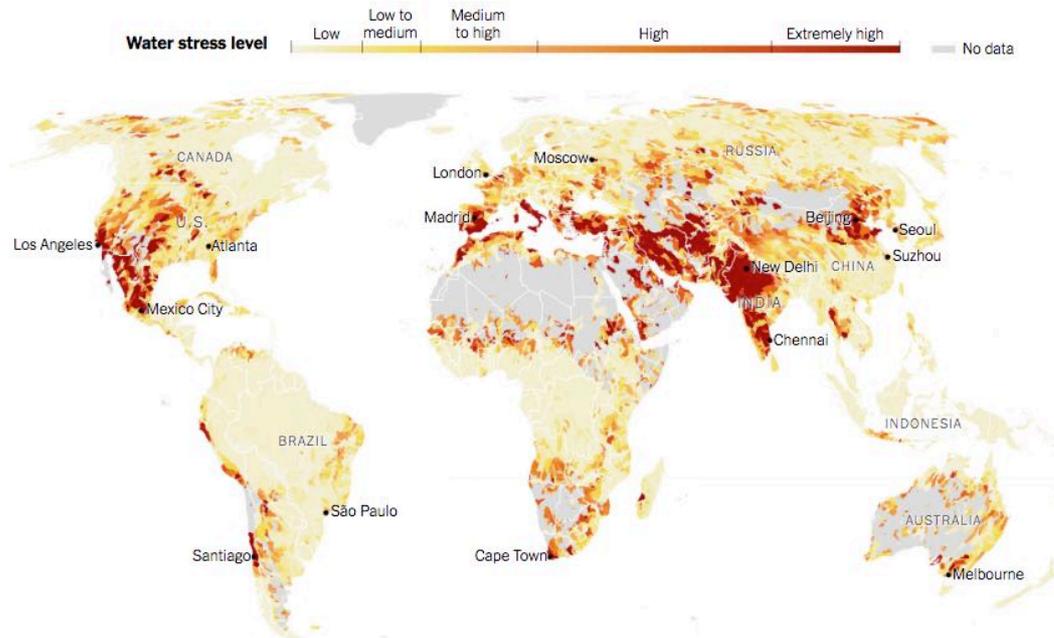


A Quarter of Humanity Faces Looming Water Crises

By Somini Sengupta and Weiyi Cai

Aug 6, 2019

BANGALORE, India — Countries that are home to one-fourth of Earth's population face an increasingly urgent risk: The prospect of running out of water.



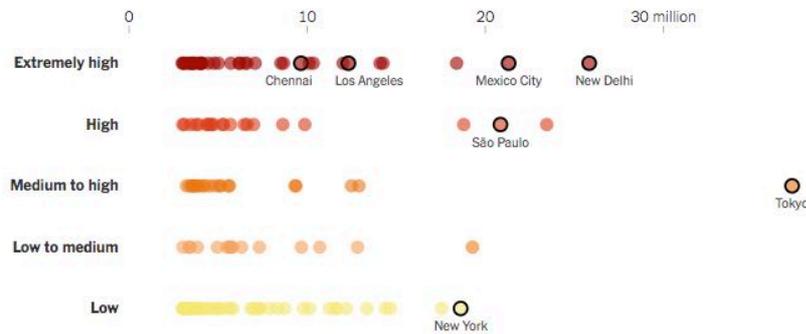
From India to Iran to Botswana, 17 countries around the world are currently under extremely high water stress, meaning they are using almost all the water they have, according to new World Resources Institute data published Tuesday.

Many are arid countries to begin with; some are squandering what water they have. Several are relying too heavily on groundwater, which instead they should be replenishing and saving for times of drought.

In those countries are several big, thirsty cities that have faced acute shortages recently, including [São Paulo](#), Brazil; [Chennai](#), India; and [Cape Town](#), which in 2018 narrowly beat what it called Day Zero — the day when all its dams would be dry.

Water Stress Levels of Urban Areas with Population Bigger than 3 Million

More than a third of major urban areas with more than 3 million people are under high or extremely high water stress.

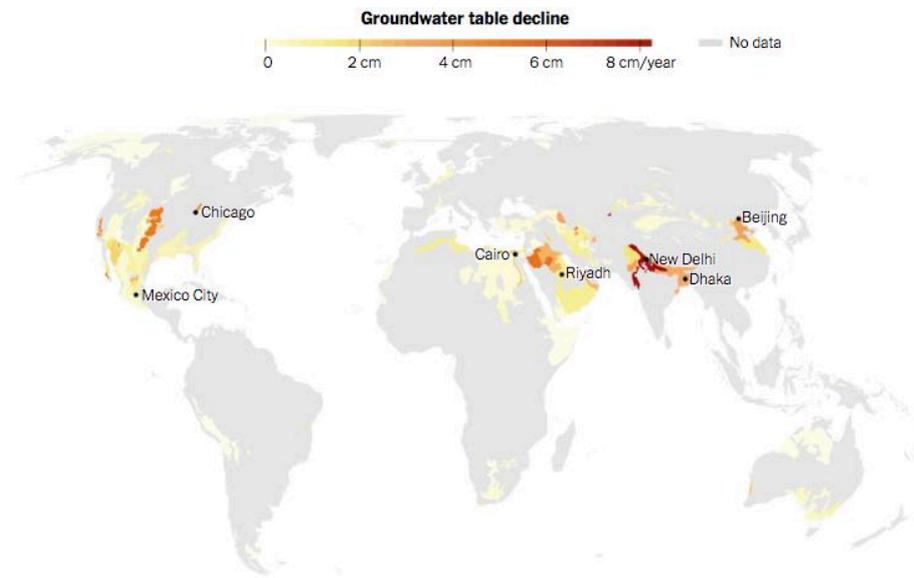


Note: Urban populations based on the U.N.'s World Urbanization Prospects 2018.

“We’re likely to see more of these Day Zeros in the future,” said Betsy Otto, who directs the global water program at the World Resources Institute. “The picture is alarming in many places around the world.”

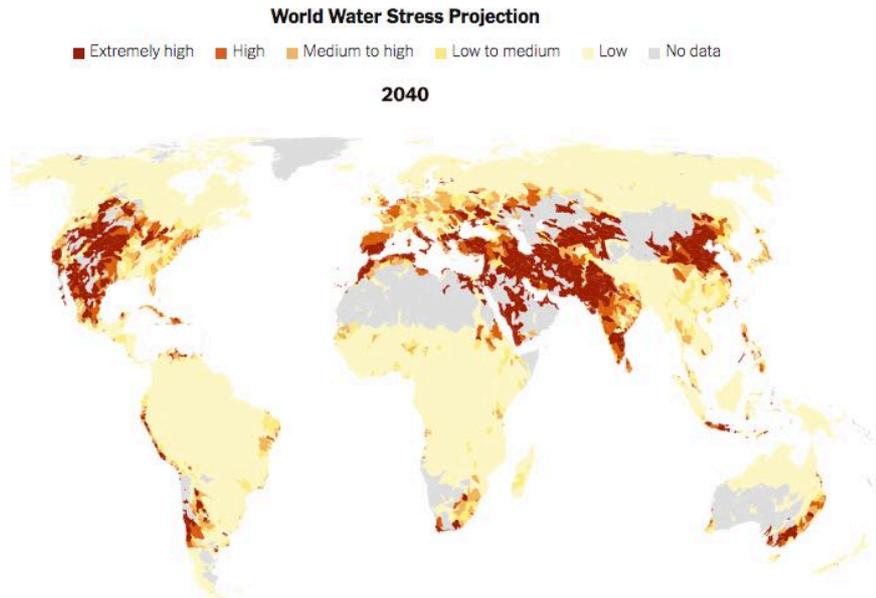
Climate change heightens the risk. As rainfall becomes more erratic, the water supply becomes less reliable. At the same time, as the days grow hotter, more water evaporates from reservoirs just as demand for water increases.

Water-stressed places are sometimes cursed by two extremes. São Paulo was ravaged by floods a year after its taps nearly ran dry. Chennai suffered fatal floods four years ago, and now its reservoirs are almost empty.



Groundwater is going fast

Mexico’s capital, Mexico City, is drawing groundwater [so fast that the city is literally sinking](#). Dhaka, Bangladesh, relies so heavily on its groundwater for both its residents and its water-guzzling garment factories that it now draws water from aquifers hundreds of feet deep. Chennai’s thirsty residents, accustomed to relying on groundwater for years, are now finding there’s none left. Across India and Pakistan, farmers are draining aquifers to grow water-intensive crops like cotton and rice.



More stress in the forecast

Today, among cities with more than 3 million people, World Resources Institute researchers concluded that 33 of them, with a combined population of over 255 million, face extremely high water stress, with repercussions for public health and social unrest.

By 2030, the number of cities in the extremely high stress category is expected to rise to 45 and include nearly 470 million people.

How to fix the problem?

The stakes are high for water-stressed places. When a city or a country is using nearly all the water available, a bad drought can be catastrophic.

After a three-year drought, Cape Town in 2018 was forced to take extraordinary measures to ration what little it had left in its reservoirs. That acute crisis only magnified a chronic challenge. Cape Town's 4 million residents are competing with farmers for limited water resources.

Likewise, Los Angeles. Its most recent drought ended this year. But its water supply isn't keeping pace with its galloping demand and its penchant for private backyard swimming pools doesn't help.

For Bangalore, a couple of years of paltry rains revealed how badly the city has managed its water. The many lakes that once dotted the city and its surrounding areas have either been built-over or filled with the city's waste. They can no longer be the rainwater storage tanks they once were. And so the city must venture further and further away to draw water for its 8.4 million residents, and much of it is wasted along the way.

A lot can be done to improve water management, though.

First, city officials can plug leaks in the water distribution system. Wastewater can be recycled. Rain can be harvested and saved for lean times: lakes and wetlands can be cleaned up and old wells can be restored. And, farmers can switch from water-intensive crops, like rice, and instead grow less-thirsty crops like millet.

"Water is a local problem and it needs local solutions," said Priyanka Jamwal, a fellow at the Ashoka Trust for Research in Ecology and the Environment in Bangalore.

India water crisis flagged up in global report

By Navin Singh Khadka



Several states in India are facing acute water shortage

The anger over water scarcity is palpable at a farmers' protest in Dharodi village in the northern Indian state of Haryana. Thousands of protesters from several villages have been demanding clean drinking water for nearly a month and half now.

Rajpati Banwala throws her hands up as she chants slogans, demanding water with hundreds of other women and men under a huge tent. "Even our livestock cannot drink the water the government gives us twice a week," she says, adding that she has been spending 500 rupees (\$7; £6) a month to buy drinking water.

Neelam Dhindsha, who was also at the protest, says she cannot even afford to buy water. "And there are many villagers like me," she adds.

"That is why I have been joining the protest even if that means that I have to wake up much earlier in the morning to finish my household chores and farm work." Their struggle for water is not an isolated one.

India is one of 17 countries where "water stress" is "extremely high", according to an exhaustive new global report released on Monday. This means that the country is running out of ground and surface water.

According to this **database compiled by the World Resources Institute, a US-based think tank advocating sustainability**, India ranks 13 among the 17 worst affected countries - a list that includes countries where large swathes are deserts such as Saudi Arabia.



Haryana is among the worst affected states in India

The report also ranks nine Indian states and union territories as having "extremely high" water stress. Haryana is among the worst hit. Punjab, Rajasthan, Uttar Pradesh, Chandigarh, Gujarat, Uttarakhand, Madhya Pradesh, and Jammu and Kashmir are the others. They all scored between four and five on scale of zero to five, with five being the worst.

Authors of the report told the BBC they had calculated "water stress levels" by dividing the total available water by the volume withdrawn. In India, they found that, on average, more than 80% of the available ground water had been withdrawn - and some 70% of it was used for agriculture.

India is in the grip of acute water scarcity by other measures as well. Large parts of the country have already faced a crippling drought this year - more than 500 million people living in at least 10 states were reportedly affected. And India's sixth largest city - Chennai in the south - ran out of water last month. In fact, **the report counts the crisis in Chennai among the world's many urban water crises in recent years.**



Chennai city ran out of water in June 2019

The water table is also being depleted in Haryana's neighbouring state, Punjab. It's known as the breadbasket of India, but farmers are worried.

Narendar Singh, a young farmer, watches in anxiety as a borewell he recently installed digs deep for groundwater.

He says that, over the years, the borewells have become deeper. The first time his family installed one, he says, they dug up to 45.7 metres (150 ft) underground before they found water. Ten years ago, they had to double the depth.

"Now we have to dig up to 153 metres to access ground water," he says.



Chennai, the city where drought is visible from space

"Soon there won't be even drinking water, forget water for agriculture. I am so worried."

Elderly citizens in Punjab and Chandigarh showed us several locations where ponds and wetlands had been eaten up by rapid urbanisation.

"There are nearly 140 development blocks in Punjab and most of them are in a 'dark zone', which means you cannot recharge the depleted groundwater," said Devinder Sharma, a food and water expert based in Chandigarh.

"India's per capita demand for water has been increasing over time," says Raj Bhagat, an expert who was part of the team that published the report.

He says the demand has increased across domestic and industrial sectors, as well as for irrigation, leading to severe water scarcity. This is supported by the government-run Central Water Commission's data, whose report from two months ago says there are more than 20 million borewells pumping out ground water across India.

India's water scarcity, according to the report, stems not so much from a deficit, but from severe neglect and a lack of monitoring of water resources.

But it warned that continuing neglect would only worsen the situation.

Chennai water crisis: City's reservoirs run dry

18 June 2019



Empty water pots in Chennai, which has run out of water

The southern Indian city of Chennai (formerly Madras) is in crisis after its four main water reservoirs ran completely dry.

The acute water shortage has forced the city to scramble for urgent solutions, including drilling new boreholes.

Residents have had to stand in line for hours to get water from government tanks, and restaurants have closed due to the lack of water.

"Only rain can save Chennai from this situation," an official told BBC Tamil.

The city, which, according to the 2011 census, is India's sixth largest, has been in the grip of a severe water shortage for weeks now.

As the reservoirs started to run dry, many hotels and restaurants shut down temporarily. The Chennai metro has turned off air conditioning in the stations, while offices have asked staff to work from home in a bid to conserve water.



People queue to get water from government trucks

Vinoth Kaligai, the general secretary of an IT workers' association, confirmed that some firms had told employees to stay at home. "But homes are also running out of water, so what are we supposed to do?" he added. The situation has also prompted clashes to break out between residents. Last week, police arrested a man for stabbing his neighbour during a fight over water-sharing in the neighbourhood.

Officials are trying to find alternative sources of water, with the city's water department starting to identify and extract water from quarries. But the big concern is the dry reservoirs and low groundwater levels.



The search is now on for new sources of water

"The only way to make this better is to improve the groundwater level," Nakkeeran, a social activist, said. "We've had dry years before but the groundwater was our saviour." The water crisis has also meant that most of the city has to depend solely on Chennai's water department, which has been distributing water through government trucks across neighbourhoods.

"The destruction has just begun," an official said. "If the rain fails us this year too, we are totally destroyed."