



CAN A DESERT NATION SOLVE THE WORLD'S WATER SHORTAGE?

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Is the world going into a water crisis? It certainly seems that way.

The U.S. government predicts that by 2025, 60 percent of the world's landmass, and 40 of our 50 U.S. states will experience water shortages— some of them extreme.

The U.S. intelligence community sees worldwide water shortages as a major national security risk. Water scarcity helped trigger the Syrian civil war and has been a key reason why Africans have migrated in large numbers to Europe. More of this can be expected.

But there is cause for optimism. And it comes from a very unlikely place—a country in the middle of a desert.

That country is Israel.

Compelled by necessity and powered by remarkable technological innovations, Israel has become the world's water superpower. By reusing waste water, by making desalination affordable, by rethinking irrigation, and by developing an array of sophisticated water conservation techniques, Israel not only has a sufficiency of water, but an abundance of it.

What Israel has done, other nations can do, too, including its Mideast neighbors. And while it's a lot to hope for, cooperation on water issues could become the basis for cooperation on other issues as well.

For Israel, an obsession with water is not new. The word “water” appears 600 times in the Hebrew Bible. For over 2,000 years daily prayers for rain in the land of Israel have been a part of traditional Jewish ritual. For the founders of the modern State of Israel, water was not only a daily concern, but a paramount question of future survival. Vast quantities of water would be needed for the millions of immigrants who would make their way to the new country. Without plenty of water, economic growth would be impossible.

But where was the water going to come from? It was a daunting challenge, but one which Israel overcame.

Today, while other nations, even ones with far more natural water resources, struggle with water management, Israel has a surplus of useable water. The desert, as Israel's founders dreamed, is blooming.

Not only does the country supply its own population with an array of fruits and vegetables, but

it exports billions of dollars worth of produce to nations around the world.

So, how does a small country with little annual rainfall, with only one freshwater lake, and with no major rivers do this?

It begins with a nothing-wasted attitude that extends from the government to private industry to farming to consumers. Israel charges its citizens the market price for water—no subsidies. You can have as much water as you want, but you have to pay for it. And when you pay for something, you tend to be more careful with how you use it.

This also extends to the nation's infrastructure. In virtually every country, massive amounts of water are wasted every year in leaky pipes. Israel has developed technology that tells it when and where a pipe is leaking, so that it can be fixed immediately. This not only saves water, but it saves homeowners and industry money on their water bills.

The biggest user of water in Israel and everywhere is agriculture. To get maximum use of its water, Israel developed the revolutionary farming technique known as drip irrigation—the process of applying micro amounts of water to individual plants at their roots. This is much more water efficient than the traditional method, still widely used around the world, of flood irrigation—flooding fields with water. Israeli scientists have also developed drought-resistant crops that need less water to grow.

Sewage is usually thought of as a nuisance, but in Israel it is now a highly valuable resource. Israel takes nearly all of its sewage, treats it to an ultra-pure level, and then reuses it in agriculture. No other country utilizes sewage as comprehensively as does Israel.

Israel has also pioneered the use of desalination, turning seawater into drinking water. Once it was thought to be prohibitively expensive. No longer. Israel built five giant desalination plants along its Mediterranean coast that together provide the equivalent of 80 percent of the water piped into Israeli homes.

Putting all of these practices and techniques together, Israel has grown into a water superpower, as well as a global center of water innovation.

As the world grows drier and thirstier, those who want solutions will look to a little country in the middle of a desert for answers.

Israel is ready with them.

I'm Seth Siegel for Prager University.