



# DVAR TZEDEK

## Parshat Vaera 5770

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*Parshat Vaera* describes part of perhaps the most famous narrative in Jewish history—the Exodus. Moshe and Aharon were appointed as Divine emissaries to Pharaoh, demanding the release of the Israelites from the bondage of Egypt. Refused, Moshe and Aharon were then tasked with bringing plagues upon Egypt, ostensibly to compel Pharaoh to release the Jewish people. The first of these plagues was the plague of blood.

Regardless of the chemical dynamics the Nile underwent during the plague of blood, it was doubtless an impressive and awful sight—the waters of the life-sustaining river running red. Not only was the Nile plagued, but in God's instructions to Moshe, all the bodies of water in Egypt were affected—from the mighty river down to the water contained in vessels of wood and stone. The text specifies that the waters of the Nile were undrinkable, and the plague caused the death of all of the fish in the river. The Egyptians, bereft of their ordinary sources of drinking water, tried to dig wells beside the Nile, in an attempt to reach potable water.<sup>1</sup>

Midrashic sources indicate that each of the Egyptian plagues lasted seven days. In the case of most plagues, we see Moshe requesting a cessation of the plague on Egypt's behalf, and the plague is subsequently removed from the land. But the biblical text gives us no such description of this plague's end. The text merely suggests that after seven days, Moshe and Aharon approach Pharaoh with a warning of the upcoming plague of frogs.<sup>2</sup>

The never-ending corruption of water still plagues many areas of the Global South today. Over a billion people worldwide lack access to clean drinking water which often has severe and deadly consequences. Cholera and other water-borne diarrheal diseases are among the leading causes of child deaths worldwide—greater than HIV or malaria.<sup>3</sup> Indeed, they are responsible for twenty-five percent of deaths in that demographic in the Global South.

One of the major causes of water contamination today is lack of effective sanitation. In fact, in about a third of all African countries, less than 50 percent of people have access to toilet facilities that do not need to be emptied by hand. Similar rates plague many Asian nations such as India, Nepal and Mongolia.<sup>4</sup> Those without adequate facilities often turn to a nearby river or stream for washing, cooking and disposal of human waste, making entire communities vulnerable to cholera and other diseases.<sup>5</sup>

Even in areas where clean water is available, it is not necessarily easy to access. For example, near the village of Kingori, Tanzania, there is a single public tap yielding clean water for the surrounding area, shared between both the

<sup>1</sup> Exodus 7:18-24.

<sup>2</sup> Exodus 7:25-8:4

<sup>3</sup> "World Water Day: Lack of Access to Clean Drinking Water and Proper Sanitation is a Growing Challenge." *US AID*. 22 March 2006. [http://www.usaid.gov/locations/sub-saharan\\_africa/features/worldwaterday06.html](http://www.usaid.gov/locations/sub-saharan_africa/features/worldwaterday06.html)

<sup>4</sup> WHO and UNICEF. *Global Water Supply and Sanitation Assessment 2000 Report*. [http://www.who.int/docstore/water\\_sanitation\\_health/Globassessment/GlobalTOC.htm](http://www.who.int/docstore/water_sanitation_health/Globassessment/GlobalTOC.htm)

<sup>5</sup> CDC. *Cholera 2008*. [http://www.cdc.gov/nczved/dfbmd/disease\\_listing/cholera\\_gi.html](http://www.cdc.gov/nczved/dfbmd/disease_listing/cholera_gi.html)

people and domestic animals. In Ingwavuma, South Africa, the residents of the rural areas surrounding the town access water through boreholes. During the summers, the boreholes in the highland areas dry up, and people in those regions need to pay to take buses to the town to acquire water, which they must then carry home for their families. The transport of water for family use is a task that falls disproportionately on young women and girls, often consuming hours of their day and preventing them from attending school.

The biblical text indicates that Moshe and Aharon did not end the plague of blood. In many ways, this task has been left to us. Thankfully, today there are numerous ways to ensure that communities have access to clean drinking water. Organizations such as Partners in Health<sup>6</sup> and Lifewater International<sup>7</sup> have developed novel latrine designs suited to various communities in the Global South, and have created educational programs to encourage the development of effective sanitation programs within those communities. There are also many new technologies that ease water purification and transportation, including inexpensive filters that can purify water of contaminants down to the scale of cholera-causing bacteria.<sup>8</sup> Some of these products have been developed by communities that need them. Both the Hippo Roller and AquaPort<sup>9</sup> were invented by Africans to alleviate the time-intensive labor of hauling water.

All of these programs are excellent solutions, but remain just a start. Contaminated water sources and diarrheal disease are not “sexy” issues, and don’t get the same press as other urgent world crises such as the genocide in Darfur or AIDS. But they are no less devastating—indeed, perhaps they are even more so—in terms of loss of life and productivity. We need to raise awareness about the magnitude of water contamination worldwide, and continue working to improve access to clean drinking water for communities still facing this plague.



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<sup>6</sup> Abu-Libdeh, Reem. “Fixing Haiti’s Environmental Woes.” *Partners In Health*, July 2009.

[http://www.pih.org/inforesources/news/Hait\\_environmental\\_projects\\_2009.html](http://www.pih.org/inforesources/news/Hait_environmental_projects_2009.html)

<sup>7</sup> “Sanitation: Latrine Design & Construction.” *Lifewater International*. <http://www.lifewater.org/sanitation-latrines.aspx>

<sup>8</sup> *Lifestraw*. <http://www.vestergaard-frandsen.com/lifestraw.htm>

<sup>9</sup> *Hippo Water Roller Project*. <http://www.hipporoller.org/>; *Aqua Port: Water Transporter for Developing Countries*. <http://www.aquaport.org/>

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