Ancient cooling method used in electricity-free fridge

Using new designs and materials science, Evaptainers' mobile refrigerator updates an ancient evaporative cooling process. The startup's founders want to address global food spoilage that costs more than USD 310 billion annually. Evaporative cooling works by fitting two containers together and filling the gap in between with water. When the water evaporates through the outer walls, it takes heat with it from the inner container.

The process can keep products inside up to 35 degrees Fahrenheit cooler than the surrounding air. Six liters of water keep a refrigerator working for 12 hours, and each Evaptainer holds 60 liters of produce. Currently being tested in Morocco, the rugged, lightweight, flat-pack fridges will also likely appeal to campers and hikers. Commercially available versions will be in stores from 2017.

Portability is an important driver in moves towards miniaturization, making surgical sterilizers accessible to remote communities and power generators easily transported. How could mobile, lightweight solutions to unreliable power sources be used to help developed countries create large scale sustainability?

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