

Water for the World

A \$3 gadget that promises to quench a user's thirst for a year without spare parts, electricity or maintenance

BY JENNIE YABROFF

WITH HIS RIM-less eyeglasses and natty suit, 35-year-old Mikkel Vestergaard Frandsen looks like the kind of CEO who enjoys a fine red. Less likely is the image of him slurping that Bordeaux through a bright blue straw the size of a fat kazoo. But slurp he has, and not just wine: he's also tasted soda, pond water, and water from a lake in Nairobi through the gizmo. "You have to suck pretty hard at first to get it moist, but after that it's easy," he says of the LifeStraw, the portable water filter manufactured by his Danish company.

Most of the LifeStraw's users will never drink anything fancier than plain water through the device. But its impact on their lives can't be overstated. More than 1 billion people worldwide lack access to safe drinking water, and 6,000 people die each day of waterborne diseases like typhoid, cholera and dysentery. In regions like sub-Saharan Africa, half of most people's water consumption takes place outside the home—either while they're working, or walking to and from school. Vestergaard Frandsen S.A.—which also produces mosquito nets and plastic sheeting coated with insecticide to fend off malaria—hopes that the \$3 LifeStraw will drastically lessen their chances of getting sick. "It's a product that can save lives without spare parts, electricity or maintenance," says the firm's CEO. So far about 2,000 LifeStraws have been sold, mostly to aid agencies. (The product is still being fine-tuned for mass production.)

The blue tubes are quite a departure from the hotel uniforms first produced by Mikkel's grandfather Kaj, who founded the company in 1957. The younger Vestergaard Frandsen never wanted to go into



TO SIP IN SAFETY: Demonstrating the LifeStraw in Uganda

He never wanted to go into the family business. So at 19 he set up shop in Lagos as an importer of car parts.

the family business. Instead, at 19 he set up shop in Lagos, Nigeria, as an importer of car parts, until a 1992 coup caused him to rethink his prospects. Upon his return to Denmark he told his father, Torben, then CEO of the company, that he would join the firm if his work could involve Africa, which he had grown to love. "I wanted to work with Africa as an adventure, not a humanitarian or philanthropic gesture," he says. "That all came later when we realized the enormous impact we were having."

His first task was to find something to do with more than 1 million square yards of surplus fabric the company didn't need. He had the woolen material cut into blankets and sold to aid organizations. "That was the first evolution," he says. Later, as

dirt-cheap textiles from China began to undermine the business, he looked for more specialized products to deliver. He began with a trap for tsetse flies, made with insecticide-laced fabric, and then expanded the concept to include wash-resistant mosquito nets (PermaNet) and plastic sheeting that can be used as blankets or for temporary shelter (ZeroFly). "Ninety percent of our business is malaria prevention," says Vestergaard Frandsen. (The workwear division was sold off in 1997.) PermaNet remains the company's most popular product, with nearly 4 million sold every month. According to the World Health Organization, such nets have helped reduce childhood-mortality rates by 25 percent in sub-Saharan Africa.

The company developed the LifeStraw in conjunction with Atlanta's Carter Center, which was working on a filter that would block guinea worm, a waterborne parasite. The first prototypes were rolled out after a devastating 2005 earthquake in Kashmir that killed more than 73,000 people and left more than 3 million homeless. Each LifeStraw contains layers of increasingly fine mesh filters that block bacteria. Iodine beads kill remaining bacteria, along with viruses and many parasites. Active carbon neutralizes the taste of the iodine and knocks out remaining parasites. The LifeStraw currently does not filter out *Giardia lamblia*, a common parasite (making it a bad choice for U.S. backpackers looking for a way around boiling their camp water), but Vestergaard Frandsen says the company is working on solving that problem. The nine-inch-long straw filters up to 185 gallons of water—about a

year's worth of use—after which it needs to be replaced.

Vestergaard Frandsen's next project is to create a large-capacity household water filter, as well as an insecticide-coated fence to protect crops. He describes both ideas with a zeal that's equal parts commercial and crusading. While visiting a clinic in western Kenya a few months ago, he saw thousands of people lining up to get "their vitamin A shot, their measles vaccination and their mosquito-repellent bed nets. As a businessman, I can be proud to get a contract for 2 million bed nets and fulfill it on time," he says. "But as a person, I can be proud that over the lifetime of the nets they will prevent the deaths of 400,000 children." Thanks to the LifeStraw, they needn't go thirsty either. ■