



Oxfam Impact

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In war-torn Darfur, a stove with a mission

For the women of Darfur who live in camps for displaced people, simply feeding a family can present extraordinary risks. But when engineers, aid agencies, and disaster-affected communities join forces to confront a challenge like this, the results can be far-reaching.

by Elizabeth Stevens

There is a workshop in the heart of Darfur, Sudan, where solutions to an array of problems are being assembled, one by one.

The clatter of hammers on metal in the shop tells one success story: men from a nearby camp are at work, earning incomes at a time and place where jobs are beyond scarce. The shiny stoves stacked in a corner of the shop are at the heart of another story—one where women get a fighting chance to protect their health, their incomes, their environment, and their lives.

Gathering firewood: The price women pay

Outside the thatched walls that surround the workshop is the world of Darfur, where since 2003, more than two million people

have been displaced by violence and terror. Unable to safely return home to their farms and villages, they have tried to build a life in the camps—settlements that continue to grow: in a single month in early 2011, more than 50,000 new arrivals took refuge in a camp of North Darfur.

But the land around the camps and towns is parched and desolate. Hardy grains and vegetables are able to grow somehow, but for miles around, the trees have vanished. And no wonder: families cook their meals over wood fires, and every tree in striking distance has been harvested.

Normally, it is women and girls who go out from the camps to gather wood. After trekking for miles they may find a tree, but they're likely to settle for its vestiges—roots that they can wrestle from the ground. Gathering firewood is not just hard work: it is acutely dangerous. The countryside is rife with bandits and armed militias, and the women and girls who meet them face the risk of assault, and even death; men who leave the camps are even less likely to return home safely.

Anyone who has the means to purchase wood at the market does so, but the price

"The stove is good because it's efficient and saves fuel and cooks faster," says one camp resident. "It's better at keeping the kitchen clean, and there is less smoke. Even a small portion of fuel can make your food. More people should have these stoves." *Elizabeth Stevens / Oxfam America*

is high: in the areas we've surveyed, families are spending 33 to 39 percent of their total expenditures on firewood, and most have resorted to selling some of their food rations to pay for it.

High-tech simplicity

In the sun-drenched camps of Darfur, introducing solar cookers might seem like the perfect way to ease the risks and burdens of burning firewood, but it turns out they do poorly at cooking local foods. Gas stoves are another alternative, and Oxfam has introduced them in some areas. But connecting the links of the supply chain for gas fuel in the midst of this conflict has proven to be a major challenge.

So in 2008, Oxfam turned to the Darfur Stoves Project—a partner that draws on the work of engineers at the Lawrence-Berkeley National Labs—and to the Darfur-based Sustainable Action Group to produce and distribute a portable, inexpensive, fuel-efficient wood stove. The Berkeley-Darfur Stove™ (as it is called) is 12 inches high, 12 inches in diameter, and has a 12-sided shape. Through ingenious geometry, it can make the most of every stick of kindling or wad of trash placed in its firebox. Women using it report that they're burning less than half of what the traditional three-stone fireplace requires; some say they've cut their fuel use by two-thirds.

The impact: Savings, safer lives, and a more sustainable future

The stoves seem to have offered some women the chance to say no to gathering firewood: a survey of two camps revealed

that eight months after receiving stoves, half of those who used to make the dangerous journey to the countryside for wood are no longer doing so.

The financial impact has also been significant: women in both camps we surveyed report that the stoves have reduced their expenditure on fuel by up to one-half. Over the lifetime of the stove (about five years), the savings could come to more than \$1,500 per family, which in one of the camps represents more than the cost of supporting a small family for two years.

Employment and fair wages are another benefit of the program: the daily pay of the 24 men engaged to assemble the stoves is twice what they would earn doing casual labor in construction.

Air quality is also likely to benefit: with less burning comes less smoke, which could have a particularly important effect on the health of the women and children who daily breathe the smoky air of tiny kitchen enclosures.

And halving the demand for wood in the camps of Darfur could significantly slow the harvest of the trees that remain standing. Combined with the work of Oxfam and partners to plant tens of thousands of tree seedlings, the stoves program could be the first step toward reclaiming land and forests back from the desert.

Small investment, big return

"Comparing the full cost of the stove—materials, transport, training, assembly, and overhead—with the economic



Women and girls face the risk of assault when they leave the camps to gather firewood. A survey of two camps showed that eight months after receiving Berkeley-Darfur stoves, half the women who once gathered their own wood are no longer doing so. Elizabeth Stevens / Oxfam America

benefits," says Andree Sosler, executive director of the Darfur Stoves Project, "every dollar invested in the stoves results in nearly \$20 in the hands of Darfuri women."

Oxfam and its partners have so far helped assemble and distribute more than 9,000 stoves; in the noisy workshop, 100 more are taking shape every day—each one a small investment in a much brighter future for the women of Darfur.

Do one more thing today: Make sure that Darfur is not forgotten



Around the world, people who are uprooted from their homes by conflict, earthquakes, and other disasters often live in a state of emergency long after the crises fall from the headlines. Your donation to Oxfam enables us to help the most vulnerable of those displaced to rebuild their lives and livelihoods.

If you want to do more, consider sharing the story of how a seemingly humble effort—like the Darfur Stoves Project—can have a significant impact on the lives of people in Darfur. Share this story with friends by forwarding a PDF of this Impact, available at oxfamamerica.org/stove.



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