

AG-WASTE FUEL STICKS • EMERGING TECHNOLOGY

Millions of people in developing countries cook their meals each day on an open fire. **Traditional cooking fuels such as firewood and dung patties are harmful to both humans and the environment.** In Bangladesh, the search for firewood contributes to severe deforestation and land erosion. Children are often responsible for making dung patties for burning, which exposes the young kids to harmful bacteria and keeps them out of school.



In a facility built in Bangladesh with support from CTI, rice hulls (an inedible by-product of rice production) are converted into low-cost fuel sticks. Using a fairly simple process of heat and compression, Bangladeshis convert rice hulls into four-foot long fuel sticks. The sticks burn clearer than firewood and dung patties, they provide employment, and don't threaten an essential resource. In addition to providing an eco-friendly alternative to firewood, the enterprise supports 6 employees and 4 vendors. Several women have opened small retail shops where they sell the fuel sticks at a price comparable to firewood. **After one year, the program reached complete sustainability, and requires no outside funding.**



FUTURE EXPANSION

Since the fuel stick enterprise in Bangladesh reached sustainability, CTI has been exploring the potential for transferring the ag-waste fuel stick technology to additional countries.

CTI is collaborating with senior design students at Michigan Technological University, who are making engineering improvements to the fuel stick technology. The improvements will allow CTI to expand the enterprise model into additional areas in the developing world.

For 30 years, the nonprofit **Compatible Technology International (CTI)** has been designing and distributing food and water devices that help people in developing countries pull themselves out of poverty and hunger. By helping communities produce food more efficiently and effectively, CTI offers the world's poorest populations sustainable pathways to economic freedom.