

# Power of One

Using worms, molasses and engineering expertise, **Richard Fuller** is cleaning up toxic pollution in the developing world



BY BRYAN WALSH

WHEN ENVIRONMENTAL ENGINEER Richard Fuller contacted me in June, I was in New Orleans covering the oil spill, which I thought was the biggest man-made disaster of the year. But Fuller was battling a different catastrophe—hundreds of children dying in rural Nigeria, their blood poisoned by catastrophic amounts of lead. A gold rush in the northern state of Zamfara had led villagers to grind ore by hand and, in the process, release massive amounts of lead dust into the water and soil. “It’s the worst lead-contamination event we’ve ever seen,” Fuller says, alarm cutting through his soft Australian accent. “This is true environmental disaster.”

If you didn’t know about Zamfara, you’re not alone. The low priority that the world—including the media—tends to place on toxic pollution in developing countries is one of the reasons Fuller founded the nonprofit Blacksmith Institute in 1999. Having worked for the U.N. to establish rain-forest preserves in Brazil, he was looking for a green cause that would provide maximum output from

minimum input. He zeroed in on toxic contamination, especially from metals like lead, mercury and cadmium. Thousands of old lead smelters, unregulated mines and other chemical spewers are causing direct and measurable misery to local residents who can’t afford to clean them up. “There’s a finite number of polluted sites out there, and you can fix them for relatively little,” says Fuller.

This summer his nonprofit sent a team of experts to Zamfara to help oversee the removal of polluted soil and educate villagers to prevent the disaster from happening again. The Blacksmith Institute has completed 50 such projects around the globe and is working on more than 40 others, often using low-cost tools like worms and molasses to suck up soil contaminants. It’s not glamorous environmentalism; there are no poster-worthy polar bears or lush rain forests involved. Fuller’s work takes place in urban slums and ravaged villages, where he is quietly demonstrating how we can save millions of the world’s poorest people from long-term health problems and early death. We just have to pay attention. ■



**Vermiculture**  
Adding worms to clean the soil in a former toxic-waste site in Muthia, India

## MR. CLEAN



25% of deaths in the developing world are linked to environmental factors, according to the World Health Organization



Each year 12 million people worldwide suffer from lead poisoning, often due to improper recycling of car batteries



Since Richard Fuller started the nonprofit Blacksmith Institute in 1999, it has cleaned up 50 polluted sites



Blacksmith can save a human life for as little as \$42 by using low-cost tools like worms and molasses to remove some toxins



The group, which enlists local partners, is working on more than 40 cleanup projects in 20 countries

FROM LEFT: DANNY KIM FOR TIME; SWEET DARRIE; ILLUSTRATIONS BY JENNIFER DANIEL FOR TIME