matters of design

gimme shelter
When disaster strikes, humanitarian design comes to the rescue

FIVE MONTHS AFTER HURRICANE Katrina, tens of thousands of people along the Gulf Coast are still desperately trying to get the Federal Emergency Management Agency to give them a mobile home or somewhere else to eat and sleep as they duct-tape their lives back together. And those futile pleas are all the more ironic considering that, over the past decade, architects and designers around the world have been quietly reinventing first-response transitional shelters and the philosophy behind them.

Montana-based Architecture for Humanity has provided critical support after the 2003 earthquake in Bam, Iran, the 2004 tsunami in the Indian Ocean, and Katrina and Rita this year, among other disasters. Cameron Sinclair, the organization’s British cofounder, estimates that there are 1,200 professionals worldwide addressing “humanitarian design,” a term that also encompasses products, services, politics, and planning. His upcoming Design Like You Give a Damn: Architectural Responses to Humanitarian Crises, profiles 84 projects that have been implemented in the past quarter century. Written with Architecture for Humanity cofounder Kate Stohr, Sinclair’s wife, the book was supposed to come out last fall, but 2008 was such a banner year for disasters that publication was postponed as the two authors nearly doubled the size of the survey.

Within a week of seeing Katrina victims on TV, architect Carib Daniel Martin had translated his fascination with small living spaces into a design for the HELP house (Housing Every Last Person). Then he and 40 volunteers built a prototype near Washington, D.C. He’s now talking to manufacturers about producing models for around $10,000, and he hopes that the federal government puts an order before the next disaster.

Sitting on a suburban lot, the prefabricated HELP house feels like a cheery cottage. It measures 8 by 12 feet, excluding a porch that bolts on, and sleeps three. “Moving the kitchen and bathroom to one end freed up two thirds of the space to function as a room instead of a hallway,” he says. Every square inch is put to use—usually two or three uses. The futon-like sofa has drawers underneath, the floor of the bathroom doubles as the shower basin, and the mirror has a clock in it. With a composting toilet and solar roof panels, the house can function off the grid if the utilities are down.

Perhaps most important, Martin says, “This little house can go on people’s property while they’re rebuilding. Instead of a FEMA trailer park that never goes away, neighborhoods stay intact.” He envisions the structure living on as a shed or guest house or being dismantled and reused for parts.

California designer Jay Shafer is a self-described “claustrophile” whose Tumbleweed Tiny Houses have attracted the interest of ecologically minded customers and Gulf Coast victims who can afford $35,000 for a transitional dwelling with cedar or galvanized-steel siding. (Or $680 for the plans.) By connecting two or more units with a dogtrot porch, buyers could accommodate a family.

Tents offer a more im-

Clockwise from top left: The Tumbleweed Tiny House Company’s XS-House clad in galvanized steel with cedar trim. The 6 ½-by-10 ½-foot interior’s cabinets of quarter-sawn knotty pine, Joey Student’s polypropylene Ha-Ori Shelter, 12 ½ feet in diameter and 8 ½ feet high when unfurled but less than 9 by 1 ½ feet in transport mode. The Desert Seal, Architecture + Vision’s tent in polyurethane-coated polyester fiber and silver-coated Mylar, designed to weather extremes of temperature.
mediate solution. The Ha-Ori, which means folding leaf in Japanese, creates a rigid structure from corrugated polypropylene folded in trapezoidal shapes. Jörg Student—who was indeed a student at London’s Royal College of Art—conceived the 80-pound tent design, which has potential in relief operations where supplies must be airlifted.

Andreas Vogler and Ar- turo Vitton, whose European partnership is called Architecture + Vision, borrowed concepts from aerospace technology and Persian architecture to create the Desert Seal. Constructed of polyurethane-coated polyester fiber and silver-coated Mylar, this lightweight tent capitalizes on the desert temperature curve by means of an opening that captures cool air by day and warm air at night; a solar panel powers a circulation fan. The prototype is only about 7 by 7½ feet, but the designers are talking to manufacturers and investors about developing larger versions.

The latest shift is to design shelters of indigenous materials such as wood or coconut leaves.

Not only are they sustainable, but the process of making or scavenging them also gets the local economy percolating again. “After a disaster, the number-one thing people want is a job,” Sinclair points out.

For every shelter design that’s built, he adds, 100 don’t get off the drawing board because of funding, logistics, or politics. But he says he’s not about to give up. “If you can tackle the issue of the one billion people who live in inadequate housing, you can change the world.”

—Laura Fisher Kaiser