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When Hurricane Ike slammed into Haiti in early September it flooded vast regions, destroyed bridges, washed away roads, and left residents without food or drinking water. Haitian Prime Minister Michèle Pierre-Louis pleaded for help, noting that over one-month-long period, back-to-back tropical storms Fay, Gustav, Hanna and Ike had killed more than 500 people and left another million homeless.

In response, U.S. Southern Command on September 5 diverted the USS Kearsarge toward Haiti for a relief mission. The amphibious ship, which resembles an aircraft carrier but carries helicopters, launched Sikorsky-built CH-53 and Lockheed Martin-built MH-60 helicopters to provide logistical and humanitarian support to the island nation. The pilots delivered about 1,500 gallons of water and 350 metric tons of prepackaged food from the World Food Program, and hygiene kits from the United Nations Population Fund.

The U.S. military praised the effort of its soldiers engaged in this disaster relief mission. But it was quick to note that stricken countries must request military assistance through a U.S. ambassador who then contacts the Defense Department. Such requests are likely to become more common as the strength and frequency of storms increase because of climactic changes unleashed by global warming. "I think that this is a business the United States will likely be in for some time," said James Carafano, a senior research fellow covering defense and Homeland security for the Heritage Foundation. "I do think this will be a growth industry."

Indeed, defense contractors have been quick to point out that their vessels, aircraft and equipment can serve both combat and disaster relief missions. Former military personnel have been forming consulting and services outfits targeting this space. And underscoring the notion that this is not a passing phase, the chiefs of U.S. Naval operations, the U.S. Marine Corps and the U.S. Coast Guard, in 2007 published an "enduring strategy" paper titled, "A Cooperative Strategy for 21st Century Seapower," in which humanitarian and relief missions play a central role.

Also in 2007, the CNA Corporation, a non-profit think tank composed of retired U.S. generals and admirals released a report titled "National Security and the Threat of Climate Change." The document explains why humanitarian and relief efforts must play a crucial role going forward, and notes that security problems can arise when states fail or grow weak and inefficient. At that stage, a country can become a safe-haven for terrorists and a threat to U.S. interests. Natural disasters can hasten the decline of a state toward that breaking point.

"This is a key document -- one not really studied outside government circles -- that really sets the tone for how government thinks about things," said Paul Smith, a professor of National Security Affairs at the Naval War College in Rhode Island. "As a result, it slowly became the norm that the military would be doing these types of missions."

New Marketing Message

While this has not exactly created an industry, it has spurred a whole new marketing angle for existing defense manufacturers and services companies. A quick scan of recent press releases by major defense and aerospace companies makes this trend clear.

For example, Sikorsky Aircraft, based in Stratford, Conn., put out a press release in April touting its Black Hawk helicopters for their role in a rescue effort after Bolivia's recent floods. "The Black Hawk helicopter continues to be a familiar sight during natural disasters as they occur throughout the world," said Sikorsky president Jeffery Pino. "That is a strong validation of the value this helicopter provides, especially for all those people caught in natural disasters."

Bethesda, Md.-based Lockheed Martin noted in its press release announcing the delivery of its first Littoral combat ship to the U.S. Navy that the ship is "a fast, maneuverable and networked surface combatant with operational flexibility to execute focused missions, such as mine warfare, anti-submarine warfare, surface warfare and the potential for a wide range of additional missions including maritime interdiction and humanitarian/disaster relief."

Northrop Grumman, a defense and technology company based in San Diego, received a \$240 million contract in July for airborne and maritime communications technologies. Their multifunction radio, according to the company, will allow "operations of highly secure, high-performance military tactical networks, connecting air, land and sea forces to communicate in a network-centric environment ... as well as communicate with civilian first-responder voice and data buttons used in disaster relief and other national emergencies."

This strategy of touting technologies as dual-purpose will increasingly be important for defense and aerospace companies as the defense budget remains stagnant or shrinks over the next few years, analysts say.

"If you can point out multiple purposes for the equipment, that can be a selling point and the easiest thing to do is to point out that something has capabilities beyond combat use," said Doug Brooks, president of the International Peace Operations Association, a trade organization representing companies involved in peacekeeping and post-conflict reconstruction activities. "It's not something they would have thought about before Katrina, but after Katrina they realized they had some valuable services."

Military Use Comes First

For one organization, having a technology that can serve dual purposes is just an ancillary benefit. The Defense Advanced Research Projects Agency (DARPA) might create technology that can help with disaster relief, but its real purpose will always be to help U.S. soldiers be faster, stronger and safer than other fighting forces. For example, DARPA has a project which connects electrodes that can pick up brain

waves, to the heads of rats. This technology could be used to find survivors buried in rubble after an earthquake. But DARPA notes that researchers are exploring this technology to help rescue soldiers trapped in collapsed buildings.

DARPA researchers are also looking to harness social networking technology to improve communications between organizations that do not normally work together. This would come in handy during a relief operation in which the U.S. military, nongovernmental organizations and local civil groups are involved but have no clear method for communicating. But again, the actual purpose for this research is to strengthen communication for U.S. soldiers.

"We are developing technologies that can provide mobile networking without an infrastructure," said Jan Walker, a spokeswoman for DARPA. "Those technologies obviously would be useful in a situation where the commercial telecommunications infrastructure is no longer working or when we send soldiers out to the battlefield, where they have to communicate sometimes across great distances with the command center and they cannot rely on using an existing infrastructure."

For disaster relief operations overseas, the U.S. Navy and Air Force will carry out most missions but the Navy would take the lead. "Unless the disaster is close to the United States, the Navy will play a critical role because they have the ability to have a platform in the maritime zone," said Smith of the Naval War College. During the Tsunami in 2004, the U.S. Navy brought medical and supply ships close to shore. "Our presence was actually outside and in the water so we surgically delivered the aid and got out without leaving a huge footprint in a culturally sensitive environment -- the Navy is ideal for that." The Air Force, however, has the airlift capacity to deliver large amounts of aid quickly and efficiently, especially in landlocked regions or far inland.

Despite the added financial burden of disaster relief missions, the military gets little in the way of extra budget for them, analysts say. Still, while the Defense Department considers the armed forces to be primarily a fighting force, it is willing to divert resources to relief operations if they are available. At the same time, Smith notes that because of the new strategy outlined in "A Cooperative Strategy for 21st Century Seapower" by the naval forces, more funds for disaster operations might be provided.

"When you actually put out a strategy in that way, you are automatically providing the rationale for a funding line in the budget for those types of assets and missions," said Smith. "I think there is a definite budgetary aspect because of the realization that this is a permanent structural trend or reality."