Igor Sikorsky once said, "If you are in trouble anywhere in the world, an airplane can fly over and drop flowers, but the helicopter can land and save your life." Time and again, we see why the helicopter has a reputation for performing jobs that no other aircraft can do. Versatile is the key word when referring to the helicopter. While quite adept at performing the routine, the helicopter is uncannily capable of managing uniquely difficult tasks, particularly those involving lifesaving missions.

Adopted by the military and used extensively during the Korean War, the helicopter saw service as a re-supply and transport vehicle, and was soon the vehicle of choice for search and rescue missions and for evacuating the wounded. Today, helicopters are still the preferred emergency rescue vehicle and have been used all over the world. The helicopter has been involved in critical operations on many levels, whether it is in searching for earthquake survivors in northwestern Turkey or in Kobe, Japan; rescuing villagers and city inhabitants from hurricanes and flooding; or delivering relief materials in sub-zero temperatures in Siberia.

Many governments recognize the need for response preparedness when calamity strikes. The United States Federal Emergency Management Agency (FEMA), is an independent agency of the federal government whose mission is to respond to emergencies created by natural disasters in order to reduce loss of life and property and to protect the nation's critical infrastructure from all types of hazards. FEMA relies on helicopters to meet a given challenge when disaster strikes.

As early as 1956, Civil Defense officials in the United States had expressed an interest in renting helicopters for disaster relief work. They understood the added advantage that it offers, as it is able to take off and land in small compact areas. The helicopter can travel where other vehicles such as trains, automobiles, and buses cannot.

The Many Faces of Disaster

Natural forces of weather, rare or cyclical events, human or accidental driven causes are likely catalysts for what we call a "disaster." Everything from earth shifts, climatic change, global warming, deforestation, El Niño or La Niña, and even conditions of war, are all contributing factors. One dictionary defines disaster as an occurrence inflicting widespread destruction and distress. Since the dawn of time, man has constantly been challenged to face and deal with the effects and consequences of grave occurrences punctuated by the loss of life, great property damage, or both.

We marvel at the mighty powers that manifest themselves as earthquakes, hurricanes, tornadoes, cyclones, volcanoes, mudslides, land-
The helicopter has proven its usefulness in disaster relief work, performing such functions as search and rescue, air-sea rescue, fire fighting, evacuations, and other humanitarian outreach efforts.

**Helicopter to the Rescue**

After a disaster or an accident has occurred, the location is usually not clearly pinpointed to those responding. Reconnaissance and assessment flights are required. This is particularly true for missions confronted by mountainous or forested terrain. Used in rescue work, helicopters are able to perform evacuations from high mountain slopes, rooftops, or locations at sea, where quick location and extraction is necessary. When situational dangers occur, such as when fire or flooding threatens a vessel and its victims, hopeful rescuers rely on the helicopter for mission success.

Patient evacuation and transportation are only some examples of the emergency work performed by the helicopter. The first crew to arrive on the scene is often called upon to lend assistance or administer to the victims prior to their safe transfer. Helicopters provide radioed geographic coordinates and any relevant information, such as additional dangers or obstacles that may be encountered by advancing ground rescue teams.

The helicopter’s initial role in these emergency situations is victim rescue, or the airlifting of critical relief supplies such as: food, emergency survival rations, safe drinking water, water tablets, water purification units, blankets, shelter, clothing, medicines, and medical assistance. These and other items are delivered to the affected site by the helicopter. As soon as the immediate situation has been stabilized and urgent needs have been met, the helicopter’s service emphasis strategically shifts to support and rebuilding efforts, such as the distribution of seed, delivery of agricultural tools, building materials, and whatever else is needed to help restore the stricken area back to normal.

As the world population continues to grow, many population centers have located near coastal areas, which are also growing along with increasing speed. This potentially can expose those inhabitants to become future victims of tidal waves or tsunamis. One estimate shows, as many as one billion people live in 40 of the 50 fastest-growing cities in the world, all of which are located in or near recognized earthquake zones.

**The Water Problem—Too Much or Too Little**

People don’t realize that most natural disasters are caused by or are related to water—too much or too little of it in one place. A red land is susceptible to sand storms and dust storms that, if severe enough, or last long enough, can ruin entire harvests. Climatic changes can bring about drought, especially in areas with a short growing season, which can then be complicated by too much rain, causing flooding. The helicopter has played a role rescuing
flood victims and delivering relief supplies in locations all around the world, most recently in Mozambique and Ethiopia.

Floodwaters threaten filtration and sewage systems. When drinking water or surface water becomes contaminated, a terrifying threat of a crippling cholera epidemic looms large. Declining soil fertility, drought, flooding, and deforestation result in food supply shortages due to crop failure and threaten our supply of water for drinking, cooking, and for washing. Sympathetic governments and relief agencies such as the United Nations Relief Program, The World Health Organization (WHO), International Federation of Red Cross and Red Crescent Societies, and many other agencies use the helicopter to help ease the suffering—often providing the only lifeline of hope to the stricken victims, and later assisting with permanent resettlement of families who have lost their homes and crops.

Fires and Wildfires

Forest fires produce toxic fumes and threaten plants, animals, and humans. Yet today, more and more communities are under construction in or near forested land. When wildfires erupt, these communities are threatened. This has become a growing problem, particularly in the Western United States. All too familiar are the scenes on the evening news showing hundreds of firefighters aided by helicopters and tanker planes battling out-of-control flames. A simple wind-fed spark, coupled by extremely dry conditions can spread and expand a forest fire to cover hundreds of acres in a matter of hours. Wind changes can cause rapid shifts and threaten to spread disaster beyond containment lines toward populated areas.

Firefighters depend on the helicopter for direct suppression efforts and support. The choppers can move quickly from point to point, and can transport firefighters much more quickly to and from the scene than road-bound ground vehicles. Many helicopters are equipped with special tanks and snorkels, or “Bambi Buckets,” which allow them to refill from nearby streams and lakes. and return to the blazing fire without landing.

Last year in Australia, several arson suspected wildfires caused considerable damage and threatened homes. Erickson Air-Crane responded by sending helitankers to assist in fire suppression. One helitanker dubbed “Elvis” waged a much publicized battle against the threatening flames and saved an estimated 300 homes. Elvis also later assisted ground firefighters near Sydney and was credited with saving a small coastal fishing resort. Two other Air crane helitankers, one named “Georgia Peach” and the other “Incredible Hulk” worked to bring the many fires under control by dumping millions of gallons of retardant on the advancing flames.

Over the years there have been thousands of examples of helicopter disaster relief work. Among those are many examples of how the helicopters’ role averted would-be disasters. One particularly memorable example took place in January 1972. Seven hundred and fifty occupants of a burning 29-story skyscraper in Sao Paulo, Brazil, were involved in a life-or-death drama. Some managed to escape in the early moments, several people panicked and jumped to their deaths. Four hundred and fifty people remained stranded on the rooftop of the doomed Andraus building. Fortunately, the victims whose escape down through the building was cut off by smoke and advancing flames had another option. The building was equipped with a helipad. During the next four-and-a-half hours, rescue helicopters performed at least 150 landings and eventually rescued everyone from the rooftop.

Credit the intercession of the helicopter for this miracle. Those pilots; Carlo de Belgrade, Jose Fernando, Portugal Motta, Carlos Alberto Alves, Claudio Finalti, Walmir Fonesca, Sayao and Hello Barosa Caldas were recognized by HAI and awarded the “Salute to Excellence” Pilot of the Year Award as a group for their outstanding feat of heroism.

Sadly, the following year in the same city, in a similar situation involving a high-rise building fire, this time without the benefit of helicopters or a helipad on the roof, 200 people perished.
Performing Critical Tasks in Difficult Situations

During a particularly bitter, wind-swept winter day in the Swiss Alps, a cable car containing 70 passengers with its cables tangled, was stranded 800 feet above Mt. Schilthorn. Air Zermatt AG and Swiss Air-Rescue (REGA) helicopters, both HAI members, made 40 dramatic flights over the next few hours and rescued all the stranded passengers. Just this past February we were witness to several recent examples of helicopter life-saving disaster relief work by HAI members. At Helicopter Association International’s HELI-EXPO held in Orlando, Florida, HAI recognized many outstanding individuals and organizations at its “Salute to Excellence” awards program. Among them, the Port Authority of New York and New Jersey Police Airborne Services Unit, which was recognized for its efforts in responding to the September 11 attacks upon the World Trade Center. Their skill, professionalism, and dedication, were sorely tested—and they gave a great accounting of themselves during some very difficult work under extremely challenging circumstances.

The WHO Oncho Program protects over 30 million people in 11 West African countries from river blindness caused by the blackfly. To destroy the blackfly, the program uses helicopters to spray biodegradable insecticides into the rivers where the fly larvae develop. Jay Mahaffey, of Evergreen Helicopters has served with the Oncho Program since 1984. Jay and the other members of the program have worked hard to help protect millions of West Africans from this dreaded disease.

Erickson Air-Crane happened to have a helicopter working in Greece at the time an earthquake struck in Turkey, causing heavy loss of life and widespread damage. Erickson’s Aircrane was put to work to try to suppress the many fires caused by the quake and to cool down the fuel facility area, which housed millions of gallons of fuel and was in danger of igniting.

These and other examples of helicopter professionals around the world responding to the call for help, continually demonstrates the power of the human spirit. The spirit of concerned, dedicated men and women, who take personal risks to save others, fully aware that the victim’s very lives depend on them. No one can predict when or where the next disaster will strike. Regardless if the crisis is the result of an accident, born of natural causes, or man-made in origin, a response will be launched. As the authorities scramble to confront the latest disaster, they will likely turn to the helicopter to play its important role, first in the rescue and then in the process of rebuilding broken lives. In deference to a familiar commercial, ask these victims and those offering assistance, how they spell relief, they are likely to respond—H-E-L-I-C-O-P-T-E-R.

Martin J. Pociask is director of communications for HAI.

Photos courtesy of Erickson Air-Crane

left, center, & right: Erickson Air-Crane helicopters respond to assist in fire suppression in Australia after arson suspected fires caused considerable damage and threatened to destroy an estimated 300 homes.