

Contending with Natural Disasters

Cubans and U.S. Gulf Coast Emergency Managers Continue the Conversation

By Elizabeth Newhouse June 2011

Introduction

The Cuban government's effectiveness in preparing for and responding to hurricanes once again drew the strong interest of emergency managers from the U.S. Gulf Coast on Wayne Smith's latest trip to Cuba in May. Delegates on the trip—the fifth since 2007 that Smith has led to introduce Americans to Cuban methods of battling hurricanes and to explore ways to cooperate—came from Louisiana, Mississippi and Florida. As had earlier groups, these emergency managers found they had much in common with the Cubans in their hurricane preparation and response, while recognizing that Cuba's centralized government has many advantages when it comes to putting plans into practice. Both sides strongly agreed that the mantra for successful hurricane management must be "educate, educate, educate." For the Cubans, this is a high priority; they work to instill a culture of preparedness starting in preschool. "What Cuba has achieved takes many years," noted Sheryl Bracewell, emergency director from Florida's panhandle.

The delegates were briefed by top managers in the fields of meteorology, emergency medicine and civil defense, as well as the Latin American Medical School, which, like all Cuban medical schools, teaches emergency medicine to all students. They also heard two points of view on U.S.-Cuba relations—from Deputy Foreign Minister Dagoberto Rodriguez and from an officer of the United States Interests Section.

Teaching Medicine to Foreigners

The delegation's first stop was an admired Cuban institution spawned by devastating hurricanes in the late 1990s: the Latin American Medical School (ELAM for its Spanish acronym). Situated a few miles along the coast west of Havana in what once was the Cuban Naval Academy, the school was the brainchild of Fidel Castro after hurricanes George and Mitch ravaged Central America. ELAM's deputy director, Dr. Maritza Gonzalez Bravo, explained that Cuba had sent doctors to help in the aftermath, leading Castro to envision a school that would contribute lastingly to saving lives, especially in the region's most remote areas. The school would train young people from these areas completely expense-free; "all we would ask is that they return to their own communities to provide medical services," said Dr. Gonzalez.



Photo of the delegation at a meeting during their visit to Cuba.

Since the first class in September 1999, more than 10,000 students from 75 countries from every continent have graduated from ELAM; 20,000 more are currently going through the six-year training. The training program focuses on primary care with a strong clinical component. The standard curriculum includes disaster medicine courses for all types of emergencies.

Many of the graduates go on to make changes in their own countries' healthcare systems. In Ecuador, a graduate will soon become minister of health. In Honduras, an ELAM group built a community hospital where none existed. In Argentina, "tattoo" (Che Guevara's Argentine nickname) groups travel to poor, remote areas providing vaccines and other services. In Haiti, numerous ELAM graduates make up Cuba's Henry Reeve Emergency Brigade, which still attends to victims of the earthquakes' aftermath.

Forty-seven Americans have graduated from ELAM, and 115 others from 22 states are currently in the system. Training courses and tutors at the school help them prepare for the U.S. medical boards. The CIP delegation met several American students, including Heather Krause from Austin, Texas, Nate Kratz from Lander, Wyoming, and Jessie Lucey from Los Angeles, California. They all spoke enthusiastically about their experience and the practical training they were receiving. "It's a strong framework for any specialty we want to pursue," said Heather.

On-the-ground Protection

The national aquarium in the Havana suburb of Playa was the venue for a discussion of Cuba's civil defense procedures. Francisco Sanchez Perdomo, an official of the provincial assembly governing the city of Havana, opened the session with Playa civil defense officials by noting the increased incidence of natural disasters. "We never thought an earthquake would be possible," he said, "but now we're preparing for one west of the capital." Fifteen municipalities make up Havana, and Playa is one of the most vulnerable. Its 12.5 kilometer (7.7 miles) coastline is subject to high winds and sea surges that can sometimes seem like tsunamis, with waves of 4-5 meters (13-16.5 feet). Though hurricanes are the greatest dangers, civil defense must also prepare for chemical disasters, torrential rains, flooding, forest fires, epidemics and drought, which Havana is currently experiencing. Preparations include pinpointing and, where possible, mitigating vulnerabilities, training workers and forming well defined pans, which are continually updated. For hurricanes, civil defense holds two days of pre-season practice exercises and drills involving the whole country.

Strong political commitment underlies the system, with responsibility running down through the political hierarchy from the office of the president to the provincial governors to the mayors to the heads of local councils and organizations.

Playa's young mayor presented details about the municipality and the challenges and procedures for keeping its population of 177,773 safe. Not only is the municipality residential, but numerous embassies are located there, as well as health and scientific institutes, academic centers and tourist resorts.

When a hurricane approaches, guidelines specify exactly what needs to be done at every step, depending on the degree of risk. If evacuation is called for, people who cannot go to the home of friends or family find shelter in staffed evacuation centers that supply food, health care and recreation, with extra care for pregnant women, the elderly and others with special needs. As soon as the storm passes, the recovery stage begins, with teams evaluating damage to structures before anyone can return home.

"If I didn't know better, I'd think you copied our plan," said Dexter Accardo, the emergency director for St. Tammany Parish, next to New Orleans. "The plans are very similar; we prepare in the same way and learn from previous disasters. We too believe education is the basis for success."

Cubans are so successful in responding to hurricanes because they keep close tabs on the population—something that would be hard to replicate in the United States. They know who lives where, who is pregnant, who is wheelchair-bound, etc. Sanchez Perdomo pointed out, illustratively, that in the last few months 3,000 people moved among Havana's municipalities and 12,000 people came in from the provinces.

The aquarium's deputy director, who also holds an official role in the Playa government, told how the staff of the aquarium, which sits right on the coast, learned the hard way to prepare for storm surges. When a hurricane in 1992 destroyed it completely, they rebuilt it. Just as they were "on the point of giving uniforms to workers for the inauguration of the new building in March 1993," he said, another storm hit and wiped it out again, along with many of the aquarium's animal species. Only then did they take the necessary preventive measures and systematically train both staff and animals to handle such disasters. Many of the aquarium's animals have been trained how to evacuate or lie low in pools until the hurricane passes. The training paid off when Hurricane Wilma hit Cuba head-on in 2005: No animals were lost and damages were minimal. "What have we learned? Educate, educate, educate," the deputy director said.

Early Warning

Dr. Jose Rubiera, chief of the early warning system at Cuba's Institute of Meteorology, subscribes to Jose Marti's 19th century admonition that "hazards should not be watched upon when they are already upon us, but when they could be avoided." In his presentation at the institute's offices across Havana harbor, Rubiera noted that tropical hurricanes (cyclones) pose an increasing problem, both in the Atlantic and Pacific Oceans, and are one of the major hazards to the Caribbean and the United States. (Only 10 percent of natural disasters are due to earthquakes, with 90 percent meteorological in origin.) The incidence of hurricanes conforms to cycles of high and low sea-level temperatures; since 1995, with temperatures high, hurricane activity has been strong, as expected. However, at the same time, the incidence has doubled from other similar periods, and the numbers of major hurricanes is 2.5 times as great, leading scientists to conclude another element is in play—climate change. This has caused the air to warm and sea-level temperatures to increase even more. Hurricanes now grow stronger at lower latitudes and transition faster from category 4 to category 5 storms. Further, strong winds and lower pressures at the hurricane's eye make storm surges higher and more dangerous to the increasing numbers of people living on coastlines, where hurricanes hit the most forcefully.

Cuba deals with hurricanes in four stages: prevention, preparation, response and recovery, with a major focus on preparation. The national forecast center, civil defense and the media work closely together, once a hurricane builds, to communicate the appropriate warnings that begin 120 hours before landfall and grow increasingly urgent as the storm nears. At 24 hours before landfall, bulletins are issued continually over airwaves that reach 99% of the island.

The most active season in recent years was 2008, when a series of hurricanes hit, causing \$10 billion in losses but only seven deaths (in the interior of the country where there had never been a hurricane before). What is required to diminish the deadliness of storms, Rubiera said, are first of all political will, then reliable forecasts, early warnings, effective civil defense and joint cooperative action among the three key institutions—the hurricane center, civil defense agency and media.

Rubiera spoke enthusiastically about his relationship with the U.S. National Hurricane Center in Miami, with which he shares data and exchanges information. Cooperation is essential because "hurricanes do not respect borders; they do not need a visa to enter the U.S." Something has come up, however, that concerns him greatly. A year ago, the National Oceanic and Atmospheric Administration (NOAA), which oversees the hurricane center, informed him they wanted to establish a direct GPS link between the Miami and Cuban centers (as exists between Miami and other Caribbean countries) rather than continue to rely on low-speed email. The Cuban government agreed and permissions were granted. However, he recently heard from NOAA that the plan had been shelved, as the telecommunications company involved had changed and it was no longer possible to move forward. "Our task is to save lives," lamented Rubiera. "To do so we need reliable, fast data. Email communication is not good enough in hurricanes." Without a faster line, lives are at risk not only in Cuba but also in Florida and the Gulf Coast states. Although Rubiera believed the embargo caused this change in plans, attorney Robert Muse pointed out that telecommunications companies are now eligible for licenses to do business in Cuba and thus the problem is more likely related to commercial viability.

In late April, Mississippi and Alabama experienced a week of severe tornados; 260 hit in one day, according to Joe Spraggins, an emergency services official from Mobile. Cuba rarely has tornados, said Rubiera, and when it does, they are not strong. However, they can be embedded—and deadly— in the circulation of a hurricane. In 1992, Hurricane Andrew, a category 5 storm, spawned nearly 200 tornados.

A discussion of categorizing storms, assessing risk and calling for evacuations ensued. Rubiera noted that hurricanes vary on either side by 187 kilometers. While forecasters want to limit warning areas—and the pressure is on them to do so for economic reasons—they must constantly adjust risk. The danger of under-categorizing storms is a concern. Residents often do not take a low-category hurricane seriously, even though it may be accompanied by a destructive sea surge.

Emergency Medicine

Dr. Guillermo Mesa Ridel, director of the Ministry of Public Health's Center for Disaster Medicine, was on hand to brief the CIP delegation. He invited Dr. Jose Portilla Garcia to open with an overview of the Cuban healthcare system. According to Dr. Portilla, Cuban medical care is free to all, and 76,000 Cuban doctors, most of whom are family doctors, cover 100 percent of the island. As a result, infant mortality is very low at 4.5 deaths per 1,000 births, and life expectancy is 78 years. One problem facing the island is the decreasing population. Though the average birthrate is 1.7 live births per woman, by 2025, more than 33 percent of Cubans will be over 65 years old. An additional 40,00 Cuban doctors practice in 68 other countries, many in areas that did not have a doctor before.

The Ministry of Health—and Dr. Mesa's center—are part of the country's strong civil defense system and formulate the plans for medical interventions at every stage of an emergency, depending on the risk. Each medical institution must have a set of detailed plans that focuses first on prevention and threat reduction and then on medical services and evacuee support for every type of disaster—hurricanes, earthquakes, floods, chemical spills, industrial accidents, fires and epidemics.

During an impending emergency, said Mesa, everything in our power is done to save lives, with children, pregnant women, the elderly and the incapacitated getting special attention. Medical brigades are stationed in isolated areas. Capacity is increased in hospitals. Psychological services are provided. "It's a myth that high technology solves problems in these situations," said Mesa. "In practice, it is the personnel, the doctors and nurses."

Through public education and training exercises, most Cubans know what to do in the case of an emergency, Mesa believes. All of Cuba's 25 medical schools offer training in disaster medicine, from workshops and short courses to masters classes. They also train foreigners. Dr. Mesa promotes Cuba's expertise in this area by working with United Nations agencies and international non-governmental organizations. For example, he is organizing a conference in 2012 in Cuba on health disasters. He believes the effects of climate change are a serious public health challenge that the international public health community must urgently find ways to manage.

A discussion ensued about the complications inherent in handling a disaster in a democratic system, with its many political layers and competing interests, compared to the integration possible in an autocratic system such as Cuba's. "It also helps," remarked Biloxi county supervisor Connie McCain Rockco to Dr. Mesa, "that you are proactive and not reactive as so many governments are."

U.S.-Cuban Relations

At a meeting at the foreign ministry, Wayne Smith asked deputy minister Dagoberto Rodriguez to review the state of Cuban-U.S. relations. After Obama's election, Rodriguez replied, the expectation in Cuba and elsewhere was that relations would improve. In fact, President Obama has fulfilled the promises he made during his campaign to permit unlimited Cuban-American visits and remittances, to allow for more flexibility in travel licenses—and to keep the embargo intact. After two years, not only is it intact but some parts have been strengthened, making it more difficult to arrange financing with third party countries than under President Bush.

At bilateral meetings every six months, Rodriguez continued, discussions avoid the difficult issues that would require unilateral U.S. action (the economic embargo and compensation payments for damages caused by it, the Cuban Five and the status of Guantanamo among them) and focus on areas of mutual interest like drugs, terrorism, academic exchanges and the environment. Two years ago, Cuba proposed a joint declaration pledging that both countries will refrain from throwing up obstacles to bilateral engagement between their scientists and environmentalists on environmental issues, especially "our common sea." However, the United States has not responded.

On the subject of oil drilling along Cuba's north coast, Rodriguez noted that Cuba will adhere to the highest safety standards and U.S. companies are welcome to participate. However, the opposition from South Florida will not deter drilling. "We must be able to develop our own energy sources," said Rodriguez. Wayne Smith and Robert Muse mentioned the bills introduced in the U.S. House of Representatives to impede international participation. "This might get through the House," said Muse. "However, the danger will come in 2012 if the Republicans take the Senate." As the pretext for the legislation is a possible oil spill, support for it is fear-based. Remove the fear by taking strong environmental precautions, Muse told Rodriguez, and there is not a chance of passage.

"U.S. drilling contractors have publicly said that Cuba's standards of safety are among the world's highest," countered Rodriguez. Cuba has no doubt that the U.S. Congress will try to approve one of these bills, but they will not stop drilling, even if some countries are frightened off from doing business as a result. By summer's end, the Chinese drilling platform should arrive in Cuba, and drilling will begin.

In response to a remark by Dexter Accardo about the lack of common sense in U.S.-Cuban relations, Rodriguez replied that the kidnapping of U.S. policy by a small group in South Florida does not serve the interests of American society.

"At some later time, we hope common sense will prevail at the official level," he said. "Now that the 2012 campaign is underway, people say maybe in 2013 things will change. But we've been hearing that every four years for a very long time," Rodriguez noted. "I don't think Obama has the willingness or the capacity to change U.S. policy," even though most of the reasons the United States has given over the years for not changing it are no longer there.

"Cuba is now in a profound readjustment of its economic model," Rodriguez continued, "and we have released political prisoners. The response from the U.S. government has been zero." To him this clearly points to a lack of coherence in U.S.-Cuban policy.

On the subject of Obama's new people-to-people travel regulations, "we want to promote strong license applications to get many people traveling to Cuba," said Robert Muse. He urged that Cuba issue tourist visas for this travel to make it as simple as possible. Rodriguez agreed that so long as the travel is "touristic" in nature, such visas are appropriate. However, groups of professionals such as doctors or educators wanting to visit hospitals or schools under people-to-people licenses will need another kind of visa so as to limit disruptions.

"We are so close and still so far," remarked Connie Rockco. "There's clearly a need for travel. Getting to know Cubans will spur Americans to lobby officials to change policy."

Rodriguez replied that Cuba receives 2.5 million international visitors a year and that there is no crime—no problem of safety or security. Even so, he noted, "Americans can go anywhere in the world but Cuba."

"When I left the foreign service 32 years ago," said Wayne Smith, concluding the session, "I promised I would not really retire until we had normal relations, and so I still have not been able to retire!"

The View from the United States

The delegates received a final, informative briefing from an officer of the U.S. Interests Section. Jimmy Aguirre, deputy in the political-economic area who is just finishing his 3-year tour in Havana, explained that the chief of

the Interests Section, Jonathan Farrar, was away visiting U.S.citizens in Cuban jails. According to Aguirre, some 20 such Americans are incarcerated and allowed quarterly visits; however, since many of them are Cuban-American—and Cuba recognizes them only as Cuban—the Interests Section is not always informed of their arrest and whereabouts.

On the subject of visas, Aguirre said it currently takes three years to obtain a visa to visit the United States from Cuba—the longest wait in the world. The problem is manpower. The total number of American officers and marines in the Interests Section is capped at 51. Because of the demand for visas, the United States would like to see the ceiling increased. There is also a long wait time for the 20,000 permanent visas issued every year through a lottery, though for these, close family can choose to be paroled in the United States while they wait. So-called "official" visas given to artists, musicians, academics and others to visit the United States for particular events can also take several months to process.

Contacts between the United States and Cuba are increasing, and "the rhetoric has gone down, though more on our side than on theirs," said Aguirre. The United States is Cuba's fifth largest trading partner and its top supplier of food. Last year, the United States was the second largest source of visitors, after Canada, with U.S. travel (mostly Cuban-American) doubling over two years. The number of European visitors is declining in relation to the increase in U.S. visitors.

Cuba's official response to Obama's new people-to-people travel regulations has been "underwhelming," Aguirre noted; if anything, "quite negative." A great number of inquiries have come from U.S. academic institutions wishing to set up programs. Recently, City University of New York professor and blogger Ted Henken was permanently expelled from Cuba because he was there on a tourist visa interviewing Cuban bloggers for a book. An advocate for lifting the embargo on his fifteenth trip on a tourist visa, Henken was banished from Cuba to send a message to U.S. academics, Aguirre believes.

Aguirre pointed out that the oil well Cuba intends to begin drilling is less than 60 miles from the Florida coast. Cubans have never drilled offshore or this deep, so naturally it causes anxiety in the United States. However, the foreign companies that will do the drilling are highly experienced. In briefings at the Interests Section, they have been reassuring about their safety standards. The Cubans are making significant investments in refineries—in Havana, Cienfuegos and Santiago—with money from China and Venezuela, hoping to go from the current 70,000 barrels to 300,000. Of these, 150,000 are needed for domestic use and the rest will be exported.

Robert Muse asked about the proposed joint U.S.-Cuba declaration on the environment that Dagoberto Rodriguez had cited. "We are still reviewing it," Aguirre answered.

Although the Obama administration now permits U.S. telecommunications companies to do business in Cuba, there has not been much interest on Cuba's part. Another hindrance is the possible garnishing of any payments from Cuba to satisfy U.S. legal judgments against the island. For now, cell phone calls to the United States cannot be routed directly from the United States to Cuba, and must go through a third country, making calls very expensive. A fiber optic cable from Venezuela will be in operation in July, increasing bandwidth by 3000 percent. Currently, Cuba's internet penetration is only 12-14 percent of the population, the lowest in the world. The new cable will allow for faster connections, but not necessarily for greater usage.

The economic changes in discussion at the highest government levels remain to be seen in practice, said Aguirre. Presently, the minimum wage and pensions for retirees are about \$9 month; top salaries are scarcely double that. Small individual businesses are being set up, but it is hard to see how they can make much money. Even so, the food rationing system is being scaled back; today, a month's ration lasts up to ten days. The government says it plans to change the rules on buying and selling houses and cars. Another possible change the government is studying will allow Cubans to travel abroad as tourists. Now Cubans cannot leave without permission, and the associated costs of getting the required documents are five times greater than anywhere else.

This year, the U.S. Interests Section was given a briefing on civil defense, in relation to the Americans living in

Cuba. "It's hard to replicate the mandatory nature of it," Aguirre said. He believes more time and resources are focused today on mitigation than response, but that there is a problem in that no regulatory framework exists to assure buildings are up to code. As for getting the word out about an impending hurricane or other disaster, "the government controls the media, so they can put only one thing on TV, and people are forced to watch it."

Conclusion

Although policy differences between the United States and Cuba remain wide and intractable, this delegation like previous delegations saw clearly how useful exchanges can be in areas of strong mutual interest outside the political arena. Hurricane preparedness is one such area, and through the many CIP-sponsored meetings over four years, U.S. Gulf Coast emergency managers and their Cuban counterparts have been able to learn each other's methods, share ideas and build relationships. For the future, Cuba Project director Wayne Smith plans to set up a group of key U.S. and Cuban managers to stay closely in touch and work collaboratively on specific hurricane issues to the benefit to both countries.

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DELEGATION PARTICIPANTS

- 1. **Dexter Accardo**, Director, St. Tammany Parish Office of Security and Emergency Prepardness, LA.
- 2. Sheryl Ann Bracewell, Director Emergency Management, Santa Rosa County, FL.
- 3. Rupert Lacy, Harrison County Emergency Management Director, MS.
- 4. Constance McCain Rocko, Supervisor of the Harrison County Board, MS.
- 5. Brigadier General Joe Spraggins, Government Liason DRC Emergency Services, Gulfport, MS.
- 6. Dr. Wayne Smith, senior fellow at CIP and Cuba Project director.
- 7. Robert Muse, Muse and Associates.
- 8. Elizabeth Newhouse, CIP associate and report author.
- 9. Jaclyn Humphrey, CIP Cuba intern.

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