

Unprepared for natural disasters

Rogelio Maduro reports on a conference of the American Geophysical Union, where experts sounded the alarm about a threat many wish to ignore.

The United States is woefully unprepared to deal with an increasing number of natural disasters, according to experts who spoke at the semi-annual meeting of the American Geophysical Union (AGU) in Baltimore, Maryland, on May 20-22. The AGU conference addressed the threats posed by natural disasters and steps that can be taken to reduce their impact. The underlying theme of the presentations was that the number and cost of natural disasters is increasing rapidly, and will continue to increase. Not as explicit, but underlying all the presentations, is that the threat, in fact, comes from the lack of investment in infrastructure and proper city planning over the past decades.

Robert Hamilton, from the U.S. Geological Survey, warned that for the past several decades the United States has faced an "anomalously low incidence of natural disasters." That lull may be coming to an end with a dramatic increase in the expected incidence of hurricanes, the possibility that several major earthquakes may soon strike California, and the potential of renewed volcanism in the Pacific Northwest.

William Hooke, director of the U.S. Weather Research Program Office of the National Oceanic and Atmospheric Administration (NOAA), emphasized that it is a myth that natural disasters affect only Third World countries. He said that natural disasters cause damage in the order of \$1 billion a week in the United States today, a number that is certain to increase, and that the United States had developed new vulnerabilities, including population growth in the two areas most prone to natural disasters, Florida (hurricanes) and southern California (earthquakes), while the nature of the disasters is mutating. Hooke said that modern U.S. cities are highly dependent on "lifelines," which include "transportation, electricity, gas, water, communications," similar to the circulatory system in a human body: They are very vulnerable, and would be very difficult to maintain in the event of a natural disaster. Hooke was particularly concerned because of the low food stocks in the United States.

When asked by about the impact of the estimated trillion-dollar deficit in transportation infrastructure over the past decades, Hooke answered that this was the most serious problem when dealing with disaster preparedness. He said that present infrastructure is not only close to collapse, but that there is no redundancy. Hooke drew an analogy to a 4,000-mile oil pipeline: A disaster that causes one small portion of the pipe-

line to break can shut it down completely. He then described the Loma Prieta, California, earthquake in 1993 in which the collapse of a handful of roads and bridges brought transportation to a standstill.

Unfortunately, the conference participants did not have any worthwhile policies to deal with these potential disasters. The main proposals were to increase the cost of insurance in disaster prone areas, to allow the Federal Emergency Management Agency (FEMA) greater control over zoning laws and ordinances around the United States, and to increase public awareness. During a press conference, the participants were asked if there were plans for major infrastructural investments, such as those made by Franklin Roosevelt to prepare the country to fight and win World War II. The speakers, who have participated in dozens of conferences, and hearings on Capitol Hill on these subjects, replied that such infrastructure-building programs had not been mentioned anywhere.

Many of the speakers specified that they were talking about real disasters, as opposed to the plethora of fictitious "disasters" that the environmentalist movement has been promoting for the past three decades.

Lull in Atlantic hurricanes ending

Bob Sheetz, the former director of the Hurricane Center in Florida, gave a presentation at the AGU conference detailing the dangers that coastal communities throughout the Eastern Seaboard are facing from hurricanes. Dismissing the theory that global warming is responsible for increasing storm activity, Sheetz elaborated on the historical record of hurricanes and demonstrated that the United States has been experiencing a lull for the past 30 years. Sheetz cited studies by William Gray from the University of Colorado, which show that the lull is coming to an end, and that we can expect a tremendous increase in hurricane activity in the Atlantic over the next few years. He then showed the charts of hurricane tracks over the 1930s and '40s, which demonstrate a density of hurricane activity 10-20 times greater than in recent years.

Sheetz emphasized that these hurricanes represent a much greater threat to life and property than earthquakes. This danger has been magnified by land speculators who have placed houses, condominiums, and resort hotels all over vulnerable coastal areas, and by cheap homebuilders who are constructing expensive, but flimsy, homes. Sheetz showed slides of

the devastation caused by Hurricane Andrew when it struck Florida last year. While older, solidly built homes largely survived the hurricane, entire neighborhoods where "modern" houses had been built, were razed. Andrew had caused over \$30 billion in damage, he said, but had the hurricane track veered just six miles, into Dade County, the damage would have been over \$70 billion. He said that we should not be surprised to see several hurricanes cause damage in the range of \$50 to \$100 billion each in the next few years.

The Hurricane Center's former director urged stronger building codes, and that homes be designed to withstand high winds. These codes should be enforced throughout the entire coastal area, from Texas to Maine. He also urged strict zoning laws to prevent expensive structures from being built on the beach, and higher insurance premiums that reflect the potential cost of damage in coastal areas. In a private discussion after his presentation, Sheetz was very critical of the design of modern "yuppie" suburban developments, with twisting roads and endless loops, as opposed to the square grids of older cities. He said such neighborhoods are nightmares for evacuations and rescue operations.

The collapse of the electricity grid

Geomagnetic storms on the Sun can potentially black out the whole country, as a result of the deregulation of the electric power industry, according to Dr. Ernie Hildner, the director of NOAA's Space Environment Center. Hildner's address at the AGU conference detailed the increasing vulnerability of the electrical power grid, communications, and navigational equipment, to solar geomagnetic storms. These storms, when they strike the Earth, can cause major electrical surges and magnetic disturbances. The longer the electric grid, the greater the electrical surges that can take place. Hildner said that with all of the power trading going on among utilities, the interconnections between the different electrical grids had increased, increasing the danger that a powerful geomagnetic storm can trigger a nationwide collapse.

Hildner was asked about the potential of this blackout taking place in the near term, as the solar cycle reaches its maximum in five years. He responded: "The electric systems have exceeded the capacity to model. The industry no longer understands how the electric systems operate. It has become an ecosystem of its own." Hildner said that the system is so interconnected that it is no longer possible to know what would happen if a few parts of the grid broke down. He said that if a large geomagnetic storm hit when the grid was near maximum capacity, it would be "very credible to have a complete blackout across the United States."

FEMA takes over earthquake programs

The federal government is taking steps to address the threat of natural disasters, but they are largely bureaucratic, and there is no plan to massively invest in the infrastructure required to truly deal with these hazards. John Gibbons, Presi-

dent Clinton's chief science adviser, used the conference to announce that all earthquake research and loss reduction programs would be controlled by FEMA from now on. FEMA is now responsible for the National Earthquake Loss Reduction Program, a new interagency effort directed at earthquake mitigation. FEMA will now coordinate all the activities of government agencies involved in the program, including the U.S. Geological Survey, the National Science Foundation, and the National Institute of Standards and Technology. This move was necessary, according to Gibbons, because state and local governments have not "kept pace with expectations" that they would adopt the latest earthquake-resistant building codes and earthquake mitigation measures.

The role of FEMA was very prominent during the special sessions on natural disasters. Many of the speakers, including Frank Nutter from the Reinsurance Association of America, insisted that FEMA had to be given greater powers to make local communities adopt the necessary codes and zoning procedures to forestall the effects of disasters. Unfortunately, FEMA may not be the best agency for the job. Following the devastating Midwest floods in 1994, FEMA prohibited flood insurance in areas that had been inundated, instead of pushing for the construction of the system of dams, levees, and reservoirs that the Army Corps of Engineers has had on the drawing boards for decades. As a result of FEMA's actions, tens of thousands of people were driven out of their communities.

U.S. environmental groups were given millions of dollars in the past five years to spread scare stories about a man-made ozone hole that would cause cancer on Earth.

**Now, for only \$15,
you can learn the truth
about the ozone scare.**

**THE HOLES
IN THE
OZONE SCARE**
The Scientific Evidence
that the Sky Isn't Falling

\$15 plus \$3 shipping and handling

Send checks or moneyorders (U.S. currency only) to

21st Century
P.O. Box 16285, Washington, D.C. 20041

