

ANTARCTIC ICE SHELF
COLLAPSES INTO SEA

HON. EDWARD J. MARKEY

OF MASSACHUSETTS

IN THE HOUSE OF REPRESENTATIVES

Thursday, April 18, 2002

Mr. MARKEY. Mr. Speaker, on March 19, scientists reported the collapse of a 12,000 year old ice sheet in Antarctica. A piece of ice the size of Rhode Island breaking off of Antarctica is amazing enough but the realization that it took only 35 days—a nanosecond in glacial time—for the disintegration of something of this magnitude should give us pause. Whether or not the collapse is related to global warming, this event should be a cautionary lesson to us all. We tend to look back on geologic history and see gradual trends but this reflects more the averaging of time than the reality of past conditions. Rapid climatic changes have occurred in the past; we should expect them in the future. We may have just witnessed an event that scientists of the future will look back on as the first sign of a rapid warming period of the 21st Century. As we contemplate the demise of the Larsen B ice sheet, we should also consider our assumptions about our ability to adapt to climate change. Gradual warming might allow us to adjust but we have no guarantee that Mother Nature will allow us the luxury of time.

[From the Washington Post, Mar. 20, 2002]

ANTARCTIC ICE SHELF COLLAPSES INTO SEA

(By Eric Pianin)

An Antarctic ice shelf the size of Rhode Island recently shattered and collapsed into the sea after an unusual warming period, stunning some scientists who said they had never seen such a large loss of ice mass in the remote Antarctic Peninsula.

The disintegration of the ice shelf—1,260 square miles in area and 650 feet thick—was most alarming to some because of the extraordinary rapidity of the collapse. The shelf is believed to have existed for as long as 12,000 years before regional temperatures began to rise, yet it disintegrated literally before scientists' eyes over a 35-day period that began Jan. 31.

"We knew that it would collapse eventually, but the speed of it is staggering," said David Vaughan, a glaciologist with the British Antarctic Survey, which announced the event yesterday in London and released vivid video images of the breakup.

Researchers and scientists who study the Antarctic Peninsula cautioned that there was little evidence to directly link the ice shelf collapse to the effects of global warming, which is induced by carbon dioxide and other man-made "greenhouse" gases. Rather, they are blaming a localized warming period that allowed melt water to seep into cracks and trigger massive fracturing of the ice when temperatures dropped.

"What we see is climate warming regionally," said Ted Scambos, a researcher with the National Snow and Ice Data Center at the University of Colorado in Boulder. "Ice shelves that have been there for centuries, maybe thousands of years, are responding to climate they haven't seen in the past. Very quickly they shatter."

But some scientists, including Princeton University geoscience professor Michael Oppenheimer, believe that more sophisticated and localized global warming models eventually will show a direct relationship between Earth's rising temperatures and the vanishing ice shelves.

"Ascribing a temperature trend in a small region like that to the broader global trend is difficult," said Oppenheimer, one of the hundreds of scientists who helped research a seminal United Nations-sponsored report on global warming. "Nevertheless, the collapse of the ice shelf in my opinion can be partially ascribed to human-induced climate change."

Experts said the loss of the ice shelf will not result in a rise in sea level because the ice was already floating. One of the most significant predicted results of global warming is a rise in sea level as ice on land melts.

Ice shelves are thick plates, fed by glaciers, that float in the ocean around much of Antarctica. In recent months, with the polar summer just beginning, temperatures were already creeping above freezing in the peninsula region. Scientists said there has also been a 50-year warming trend in the peninsula, averaging approximately 0.5 degrees Celsius per decade, which is considered a sensitive, early indicator of global climate change.

But the overall climate picture in the peninsula, nearest to southern Argentina and Chile, is complicated and hard to generalize. Glaciers elsewhere on the continent are both thickening and thinning as temperatures show conflicting climate trends. In January, for example, researcher Peter Doran said scientists working in the McMurdo Dry Valleys of eastern Antarctica have found temperatures dropping since 1986.

The Larsen B ice shelf, as it was called, located on the eastern side of the peninsula, collapsed into a plume of small icebergs and fragments. The amount of ice released in a month's time was enough to fill 29 trillion five-pound bags. The collapse was first detected on satellite images this month by the National Snow and Ice Data Center. A British research vessel, the RRS James Clark Ross, was in the area just as the event was occurring and provided vivid images of the vanishing ice from the ocean's surface.

It was the largest single event in a series of retreats by ice shelves in the peninsula over the past three decades. "We're all simply astounded by the uniqueness of the event," said Christina Hulbe, a geology professor at Portland State University in Oregon who collaborated on research into Antarctica's breaking ice.

Some environmental groups seized on the breakup to renew their plea to President Bush to take more aggressive action to reduce emissions that contribute to global warming. Bush has disavowed the Kyoto global warming treaty concluded last November by Japan, European countries and Russia, which would force deep cuts in carbon dioxide emissions. Instead he recently announced proposals to encourage industry to reduce emissions voluntarily.

"This stunning development warns of the dangers of governments doing too little to halt global warming," said Lara Hansen, a climate scientist for the World Wildlife Fund. "The visibility and sheer scale of what is happening in Antarctica should provide a wake-up call to policymakers worldwide."

PAYING TRIBUTE TO RITA
BARRERAS

HON. SCOTT McINNIS

OF COLORADO

IN THE HOUSE OF REPRESENTATIVES

Thursday, April 18, 2002

Mr. McINNIS. Mr. Speaker, I would like to take this opportunity to recognize the efforts of a woman who has devoted her life's work to

improving the lives of children, the elderly, and the disabled in the State of Colorado. Rita Barreras has taken tremendous strides in the social services field and has proven herself a dedicated leader in her profession. For her service to others, she was recently honored by her alma mater, the University of Southern Colorado, as Outstanding Alumnus. It is my honor to bring the accomplishments of such an astounding provider of care and service before this body of Congress, and this nation.

Rita is currently the Director of the Division of Aging and Adult Services for the Colorado Department of Human Services in Denver. In this position, she provides the leadership and vision for sixty-three social service county departments. After twenty-five years in the field, Rita is known as a respected administrator and dedicated care provider. She is credited with many innovative policies that have changed the lives of the elderly and aging, as well as their families throughout Colorado. A 1974 graduate of the University of Southern Colorado, Rita attributes much of her success and her approach to her profession to her experience and education at USC.

Rita has long been an active member of the community, and has gone to great lengths to improve the lives of her fellow Coloradans. She serves as a Board Member of Metro Denver Hospice, the Denver Foundation, and the Colorado Hispana Leadership Council. She also serves as an advocate for the United Way, the Metro Denver Homeless Initiative, and the American Diabetes Association. As a member and leader of these groups, Rita has been a driving force in developing and achieving worthy and often difficult goals for the organizations.

Through her professional success and her unflinching efforts to help others, Rita has become a model citizen of the Hispanic community and the broader Colorado community. She has been well rewarded over the years, most notably in 1993 when she was a nominee for the Denver YWCA's Women's Achievement Award, where she was invited to attend and organize the Colorado Delegation for the White House Conference on Aging. In addition, in 1995, the AARP honored Rita with the Partnership Award for her successes in providing care to the aging.

Mr. Speaker, it is a great honor today to bring the accomplishments of Rita Barreras before this body of Congress, and this nation. Rita embodies the extraordinary spirit of service and dedication in this country, and it brings me great pride and joy to bring her efforts to your attention today. Thank you for all of your efforts in improving our lives and community, Rita. Good luck, and congratulations on your recent achievement.

TRIBUTE TO MRS. HELEN
FREDERICK

HON. JAMES E. CLYBURN

OF SOUTH CAROLINA

IN THE HOUSE OF REPRESENTATIVES

Thursday, April 18, 2002

Mr. CLYBURN. Mr. Speaker, I rise today to pay tribute to Mrs. Helen Frederick of Florence, South Carolina. Retiring after thirty years of service, Mrs. Frederick is being recognized for the contributions she has made to the higher education community in the State of South Carolina.