

SHELDON WHITEHOUSE

★★ UNITED STATES SENATOR FOR RHODE ISLAND ★★

Hudson Institute Speech

Thank you first to Hudson for inviting me to the launch of this report, thank you to Ken for the honor of turning up to my remarks, I appreciate it very much, and to Ambassador Haqqani for your great leadership and our relationship with Pakistan and for your very, very kind introduction. The Hudson Institute report comes at a critical time.

In the region, relations between Pakistan and India have long been fraught; in human history, violent conflicts over water are as old as memory; Kashmir is a crucible of contest for riparian control of great rivers; and climate change is destabilizing water flows. The result of this combination is a region ripe for conflict, even devastation.

A piece of this story is found at Ohio State, in a nondescript, industrial-looking building that you get into up chipped concrete stairs. Down a flickering, linoleum hallway is a meatlocker-type door, behind which is one of the most remarkable libraries on the planet. Instead of books however, this library stores ice cores, drilled out of glaciers around the world by Professor Ellen Mosley-Thompson and her husband, Professor Lonnie Thompson. Ellen and Lonnie are glaciologists who run Ohio State's Byrd Polar and Climate Research Center. They have spent their lives studying the world's glaciers—including over 34 years working and researching in the Himalayan region.

Behind that meat-locker door, a vast freezer holds their ice core samples, cut out of ancient glaciers around the world. Some of which are now gone, those long cylinders of ice in an Ohio freezer their only remaining relic.

State-of-the-art instruments allow scientists to read the ice cores. By evaluating ratios of oxygen and hydrogen isotopes, they can build a record of atmospheric temperature going far before humankind into Earth's history. Molecules and dust particles measured with chromatographs and particle counters tell stories of prehistoric droughts, and how farming and industrial practice contributed to air pollution over the centuries.

The ice cores tell us that humans are fundamentally altering the chemistry of the Earth's air, and they tell how the changes caused by our emissions are rapidly altering the Earth's climate. Ellen and Lonnie observe climate change in the Himalayan region -- not hypothetical models, not far-off projections, but present observations by experts who've worked for decades in those mountains. And 30 years of satellite data tells the tale of glacier retreat on the Tibetan Plateau; the most intense in the Himalayas.

If -- if -- we manage to keep global temperature rise to 1.5°C, Lonnie and Ellen warn that temperatures across most of the Himalayas would still rise 2.1°C on average. This "optimistic"

scenario would cut Himalayan glacier mass more than a third by 2100. Business as usual means loss of nearly 70 percent of glacier mass.

This has enormous geopolitical implications. The U.S. Institute of Peace reports three hazards: that “poor responses to climatic shifts create shortages of resources such as land and water. Shortages are followed by negative secondary impacts, such as more sickness, hunger, and joblessness. Poor responses to these, in turn, open the door to conflict.” I would add a fourth hazard to their list: in the international competition of ideologies and ideas, reputational harm to America, capitalism and democracy for having failed to act timely to address the carbon emissions problem.

As your report points out, these high glaciers of the Himalayas are essential to Asia’s water supply. Yearly snow and glacier melt feeds rivers throughout Afghanistan, Pakistan, Bangladesh, Bhutan, India, and Nepal. Over one billion people rely on this water source. One river, the Indus, provides 40 percent of the dry-season water for China, Pakistan, and India.

Pakistan’s major rivers are all fed by glacial meltwater from India. More melting means more flow, and climate change also can intensify heavy rains during monsoon season. The combined effect can be devastating floods. In 2010, floodwaters surged through Pakistan’s Indus valley, killing more than 1,700 people, causing food shortages for 4 million people, and resulting in an estimated \$43 billion in property damage. Disasters like this strain the capacity of governments, and allow extremists to stoke resentment and conflict.

Because they are melting, the glaciers are also shrinking. At some point, the swell of added meltwater is offset by the shrinkage of the glacier, and the system veers from flood toward drought. As glaciers in the Western Himalayas continue to disappear, the runoff that supplies Pakistan’s rivers could drop by 40 to 50 percent.

On top of all of this, India is planning to build dams on the Chenab River in volatile Kashmir, through which the river flows downstream to Pakistan. Pakistan fears India pinching the Chenab’s flow to put pressure on Islamabad, especially in times of heightened conflict. Suspicions of riparian mischief run high, and partition-era memories linger. Food security, power generation and public safety are all at stake, giving nuclear-armed adversaries a lot to fight over.

The disruptive effects of climate change are of course not unique to Asia. Here in the U.S. the average number of billion-dollar weather disasters is about five per year; this year the U.S. has already seen 15 of those billion-dollar weather disasters so far.

Every nation must work to reduce the carbon pollution driving global climate change. I believe we have a sensible remedy before us: a carbon fee, like the one Senator Brian Schatz and I introduced in our American Opportunity Carbon Fee Act.

The idea has bipartisan bona fides. Virtually every Republican who has thought the climate change problem through to a solution comes to the same place: put a price on carbon emissions and return the revenue to the American people. Former Treasury Secretaries Baker, Shultz, and Paulson; former EPA Administrators Ruckelshaus, Thomas, Reilly, and Whitman; and leading

economists and former presidential economic advisors Arthur Laffer, Gregory Mankiw, and Douglas Holtz-Eakin, all support a revenue-neutral, border-adjustable carbon fee.

It is imperative that we work towards a solution. A report by the National Intelligence Council prepared in January for the new president informed him that “issues like . . . climate change invoke high stakes and will require sustained collaboration.”

The report released today echoes that call and offers concrete recommendations. “Continue providing natural disaster relief and taking precautionary measures to mitigate the effects of severe weather events,” it advises. “Washington can help alleviate, even if indirectly, the effects of natural catastrophes and climate change in the region. By doing so, it would forestall economic crises and destabilization that could result from increases in the number and severity of extreme weather events.”

Traveling in Pakistan after the floods, I was struck by how keen the gratitude was for American help. Someone rescued by an American helicopter, or treated by an American doctor, or fed by American MREs, does not soon forget it.

Thank you for this compelling analysis of the geopolitical and environmental issues facing the Himalayan region. I look forward to continuing this important discussion.