



Center for Strategic and International Studies ■ Washington, D.C.

The Changing Face of Risk

2006 Global Strategy Institute Anniversary Conference

The list of major disasters—both natural and inflicted by humans—over the past 18 months has been nothing short of overwhelming. The year 2005 began with urgent efforts to address the massive effects of the Indian Ocean tsunami. Over the course of that year, we witnessed the July bombings in London, the arrival in August of Hurricane Katrina, the development of Hurricane Stan in the Caribbean, and the earthquake in Pakistan in October.

These various traumas all suggest the need to reassess the broader risk environment around us. By now it is cliché to say that 9/11 fundamentally altered the risk calculus. The challenge in looking forward is developing a framework with which we can better understand how the full spectrum of risks has changed, is changing, and will change in the future.

For these reasons, the CSIS Global Strategy Institute devoted its April 2006 anniversary meeting to the theme of “The Changing Face of Risk.” The goal was to assemble a group of speakers and participants with deep insight on the issue of risk—stretching from traditionally defined geopolitical risk and global hotspots to economic and financial risk to the risks associated with new threats such as avian influenza. A summary of the comments made at that meeting is presented below.

Strategic Vision for Periods of Crisis or Uncertainty

Vice Admiral Thad W. Allen recounted his experience serving as Principal Federal Official overseeing the Hurricanes Katrina and Rita response and recovery effort in the Gulf Coast region and challenged the audience and the nation to think more carefully about the lessons of the disaster. “It was not a 100 year storm,” Allen observed, “It was a 1,000 year storm... one of the more anomalous and asymmetrical things that has happened in the history of this country.”

Allen posited that Katrina was a hybrid event, combining the amazing impact of a massive hurricane with “the use of a weapon of mass effect without criminality” against New Orleans when the levees collapsed or overflowed and flooded the city. He used this analogy to further explore the difficulties in emergency response to a homeland security incident, and the complexities of coordination not only among government agencies, but between federal, state and local authorities. Allen also noted the complexity—and advantages—of working with civil society groups more broadly in disaster response and recovery.

Strategic Vision Award

Vice Admiral Thad W. Allen, Chief of Staff, United States Coast Guard (USCG) was presented with the CSIS Global Strategy Institute 2006 Strategic Vision Award. A visionary leader with the ability to link present realities with future concerns, VADM Allen has demonstrated outstanding strategic insight and leadership not only in spearheading long-range planning for the U.S. Coast Guard, the Department of Homeland Security, and the U.S. government more broadly, but also in his recent role as Principal Federal Official (PFO) overseeing Hurricanes Katrina and Rita response and recovery effort. VADM Thad Allen has been confirmed to serve as the 23rd Commandant of the USCG.

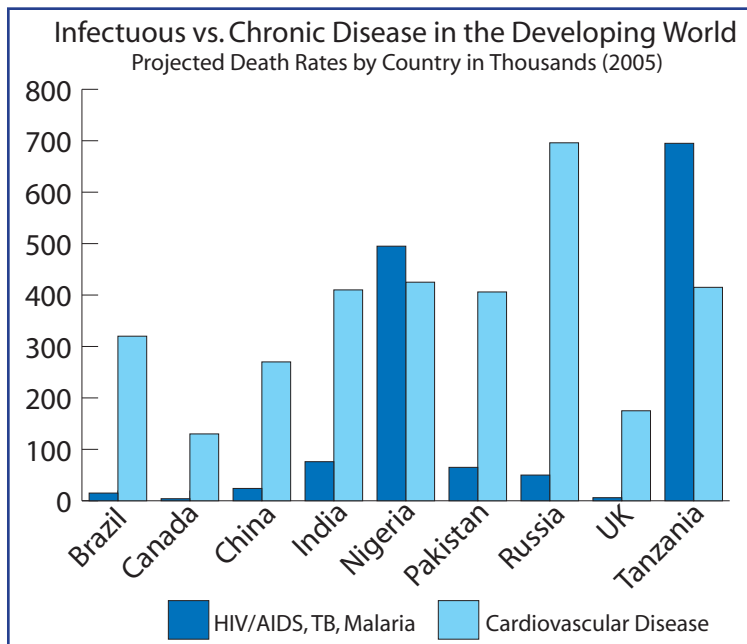


Vice Admiral Thad W. Allen of the
U.S. Coast Guard

Allen observed that although White House and DHS reports on the aftermath of the Gulf Coast disaster provide important lessons, there remains a need to codify leadership at a legal and operational level should disaster of the magnitude of Katrina strike again. To this end, strategic gaming, simulation and contingency planning will play a key role.

The Challenge of Global Chronic Disease

Dr. Carolyn Runowicz is director of the Carole and Ray Neag Comprehensive Cancer Center at the University of Connecticut Health Center and is the 2005-2006 President of the American Cancer Society. In her remarks, Runowicz highlighted the growing impact of cancer across the globe. In contrast to the continued decrease in the incidence and mortality rates of cancer in the United States, the developing world will constitute 75 percent of the world's cancer deaths



Source: World Health Organization (2006)

by the year 2020. The worldwide rise of cancer—specifically in the developing world—can be attributed to increased life expectancies, growing elderly population cohorts and the continued impact of infectious agents and carcinogens linked with cancer. The adoption of Western lifestyle behaviors (high fat diet, lack of exercise and child-bearing patterns) and the increase in tobacco use further exacerbate these trends.

Runowicz expressed hope that predicted rises in cancer incidence and death might be reduced by technology and preventative medicine. Of note, there is now a vaccine to prevent the spread of the infectious Human Papillomavirus (HPV). HPV causes the majority of the world's cervical cancers—the second most common type of cancer for women in the developing world. Infectious agents such as HPV account for 18 percent of all cancers in the world and 25 percent of all cancers in the developing world. The pathogens causing stomach cancer and liver cancer are also linked to communicable diseases and their pathogenic precursors are preventable through immunization. Changing behavior linked to cancer represents an even more difficult challenge. Fighting tobacco use remains an uphill battle, but one receiving increasing attention in the developing world. Runowicz also noted that there is increasing access to high quality cancer detection and treatment programs worldwide, saving lives and money, and preventing suffering.

Runowicz expressed hope that predicted rises in cancer incidence and death might be reduced by technology and preventative medicine. Of note, there is now a vaccine to prevent the spread of the infectious Human Papillomavirus (HPV). HPV causes the majority of the world's cervical cancers—the second most common type of cancer for women in the developing world. Infectious agents such as HPV account for 18 percent of all cancers in the world and 25 percent of all cancers in the developing world. The pathogens causing stomach cancer and liver cancer are also linked to communicable diseases and their pathogenic precursors are preventable through immunization.

Preparing for Pandemics

“Hope is not a strategy” was the overarching message of **Dr. Julie Gerberding's** presentation as she articulated the challenges posed by preparing for pandemic influenza. Gerberding has served as the Director of the Centers for Disease Control and Prevention (CDC) and the Administrator of the Agency for Toxic Substances and Disease Registry since July 2002. In her remarks she identified four key challenges in responding to risk: imagination, complacency, scalability, and connectivity.

With these in mind, Gerberding considered the immense task of preparing for avian influenza. She noted the finite resources available in the United States in the event of a pandemic—for instance, limited intensive care unit beds, respirators, and staff—and she explained that against this rational examination of resources, the potential for an outbreak is simply catastrophic. Current estimates suggest 2 million Americans dead and another 1.5 million in need of intensive care.



Dr. Julie Gerberding, Director of the Centers for Disease Control

As a result, Gerberding indicated that “managing the message” to induce rational action among the populace at a time of heightened anxiety must be the essential element in any strategic plan to properly address and contain pandemic influenza. Learning from the SARS outbreak, failure to communicate, to intercept and isolate an outbreak early would cause chaos and set the conditions for a worst case scenario.

Sources of Risk: Persistent and Emerging

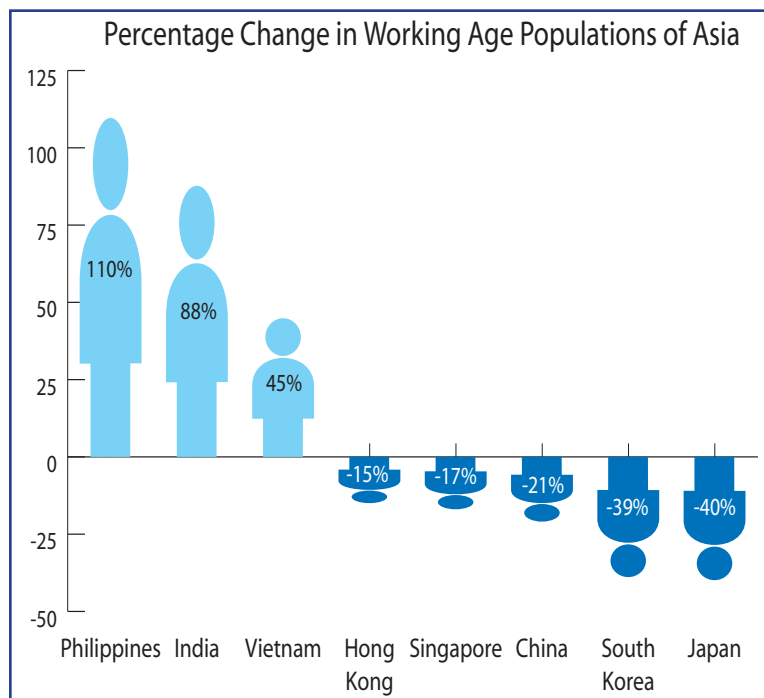
Panel experts focused on three vectors of risk of great importance in two regions certain to define the future—energy supply and demand, demographic change, and natural disaster risk in the regional context of the Middle East and East Asia.

Dr. Frank Verrastro, Director of the CSIS Energy Program, stated that the combination of high demand for energy, low spare capacity for refining and production, and instability at the supply sources will continue to produce price volatility and ultimately render unsustainable the current U.S. energy strategy. Verrastro noted that global energy demand will increase 50 percent out to 2025—the majority of this from Asia—with a growing reliance on hydrocarbons and without the typical lags in consumption patterns that allow sufficient buildup of reserves to react to peak demand times (the summer driving season, for instance). Unrelenting demand is likely to cause shortages and price spikes.



Panel members (from left to right): Dr. Frank Verrastro, Erik Peterson (director of the Global Strategy Institute), Dr. Robert Chen, and Dr. Richard Jackson

Meanwhile, supply sources constitute a serious continued risk, Verrastro added. Overwhelmingly, oil and natural gas are located in unstable parts of the world, such as the Middle East. In this light, “[m]anaging international risk may be a better [policy approach] than energy independence” to ensure energy security. Verrastro also noted that in 2004 and 2005, despite countless other sources of global instability, hurricanes in the Gulf of Mexico accounted for the largest losses in oil production capacity.



Source: United Nations (2005)

Dr. Richard Jackson, Director of the CSIS Global Aging Initiative stated that with the exception of Japan, all of the nations of East Asia are young nations preoccupied with development; however, East Asia is about to undergo a stunning transformation. “The problem isn’t too many babies anymore,” said Jackson. “The problem is too many old people.” This demographic shift will lead to a growing old age dependency burden—a heavy pull on government budgets, employer payrolls and family support networks.

This reality will be especially pronounced in China and the key question remains of whether China will grow rich before it grows old. Without exception, all developed countries grew rich before they grew old. Jackson cited real risk of social unrest in the next fifteen years as the aging overhang becomes more pronounced. Confucian society has always been organized with the daughter-in-laws of the family taking great responsibility for care of the elderly. Going forward, there will be a shortage of daughters-in-law, requiring the state or retirees to accept more responsibility for their welfare.

Meanwhile, Jackson was more upbeat on typically grim predictions of Middle East youth bulges and population explosions. Contrary to expectations, he said, the outlook is beginning to improve and growth rates are beginning to stabilize, though complicated by large pools of working age persons needing to be paired with job opportunity. Moreover, it is not a foregone conclusion that fertility rates will continue to decrease in the region, or that economic activity and sufficient engagement of the entire workforce can be achieved.



Dr. Robert Chen, Dep. Director of Columbia University's Center for International Earth Science Information Network at the Earth Institute

Dr. Robert Chen, the Deputy Director of the Columbia University Center for International Earth Science Information Network at the Earth Institute discussed findings from the joint Columbia University-World Bank "Global Natural Disaster Risk Hotspots Project." Natural disasters constitute tremendous risk in economic and humanitarian terms in developed and developing countries alike, from tsunamis to earthquakes to hurricanes. The concept of "hotspots," Chen said, provides a new lens to view risk because it takes into consideration overlapping hazards affecting the same geographic location. Thinking across hazards is becoming more important, he noted. "I don't think we've thought through the impact of a trillion dollar event anywhere in the world—on the global economy, on the...rehabilitation issues."

Often, hazards collide to create mega-disasters—like the hurricane destruction of Katrina, followed by the flooding of the broken levees, followed by the impact of Hurricane Rita. History has proven that such scenarios are not uncommon, Chen noted. In the future, climate change and environmental degradation can potential-

ly affect the frequencies of the hazards and multiply the impact on hotspots, as well as the number of hotspots. While the ability of experts to better understand risk increases, Chen observed that we have yet to determine appropriate responses to human settlement patterns on a massive scale—whether in earthquake-prone Tokyo and Istanbul or population-dense and typhoon-prone coastal East Asia and Central America.

Fifteen Responses to Risk

This panel focused on approaches to mitigate and arrest risk. Panelists were asked respectively to consider the following areas: international financial crises, the role of technology, and national security spending. Across panelist responses emerged the common theme of realistic forward-planning and organizational adaptation to meet a changing set of realities—from demographic shifts to trade imbalances to technologically-driven transformation.

Ambassador Richard McCormack, CSIS Senior Advisor observed that, "The most important advice to solving international financial crises is not to wait to let the lightning strike. Look out ahead and if you see something that looks like it's unsustainable...do something about it." Overcapacity in China and the United States' huge trade deficit are examples of such storm clouds on the horizon. Derivatives also pose a significant risk to the system as a whole in the event of certain contingencies. Inflation remains another important concern, especially given the highly leveraged position most Americans have assumed with variable rate home equity loans to finance further consumer spending. To intercept future problems, McCormack suggested that leaders quietly mobilize pressures "before the problems hit the front pages of the newspapers."

Dr. James Lewis, Senior Fellow and Director of the CSIS Technology and Public Policy Program, offered an optimistic look at what he called a "positive, accelerating trend" in the use of technology to mitigate risk. Lewis noted that the greatest threat to America today is in fact the epidemic of obesity—not terrorism, cybercrime, war, or other past risk factors. Lewis argued that technologies are only beginning to be properly understood and integrated by organizations for risk mitigation. "Technologies can improve performance and remove uncertainties," he said. Lewis listed the promising technologies as information and communications tech-



Ambassador Richard McCormack, CSIS

nology, sensors, geo-navigational systems and biomedical technologies. In order to better leverage technology for risk reduction, Lewis offered the following key points:

1. Adapt organizations to better integrate technologies;
2. Utilize technologies to improve government performance;
3. Continue to encourage technological innovation;
4. Reduce technological vulnerabilities (above all through dispersal of assets and creating robust networks);
5. Work to accelerate the pace of change.

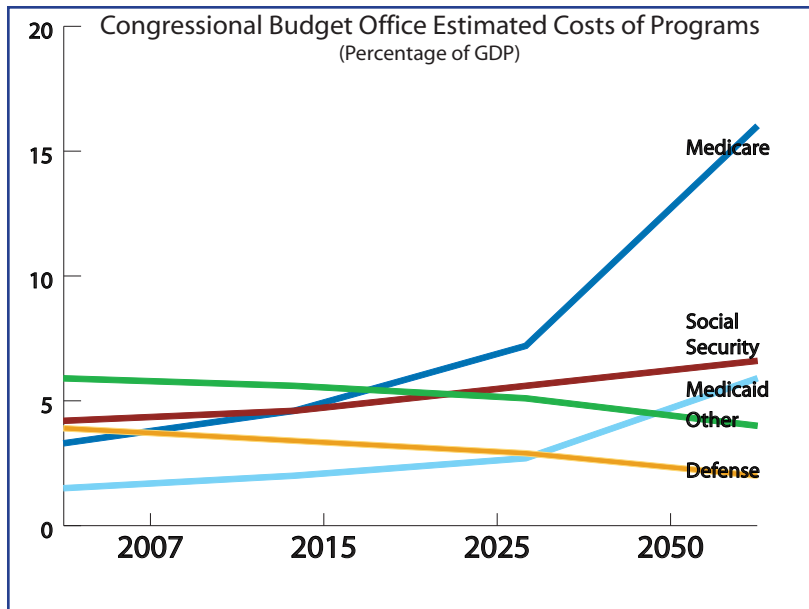


Dr. James Lewis, CSIS

Dr. Anthony Cordesman, CSIS Arleigh A. Burke Chair in Strategy, began his remarks by stating that with the way the federal government already spends money, there is no need to identify any additional areas in which to “invest.” Cordesman argued, “When I look at threats to national security, I don’t disregard foreign threats or terrorism, but I think we are our major threat to ourselves. The question really is how do we use money, and how do we use it wisely?”

Cordesman specifically drew attention to budget and expenditure projections provided year after year by the White House and Congress that cannot be trusted because of the practice of intentionally underestimating spending. In addition fast-increasing entitlements will eventually squeeze out all non-entitlement spending. “We have lived very well and become the most powerful nation on Earth spending about 18-20 percent of our gross national product on the federal budget and we should cap it at that,” Cordesman said.

He suggested the United States must look long-range at growing costs and spending to determine how to adjust the budget to achieve budget sustainability. In the area of entitlement spending, Cordesman noted that the problem is not social security costs, but rather Medicare. Medicare increased ten times as a percentage of the gross domestic production between 1970 and 2004—from 2.6 percent to about 3.3 percent in this fiscal budget. It will be 16 percent in 2050, and certainly by that point people will have to pay for their own medical costs when they get older if we are to have a functioning economy. Cordesman believes Medicare costs are linked with the very high costs generally of healthcare in the United States. The United States spent almost 14 percent of GDP in 2000 on health care costs, and will spend 17 percent in 2007 and 20 percent by 2015.



Source: Congressional Budget Office (2006)

Cordesman observed that current levels of defense spending are unrealistic with such entitlement spending on the horizon unless policymakers and Americans make major trade-offs, which they appear unwilling to do. As a bottom line, Cordesman stated, “We cannot afford defense transformation as defined by this [administration].” As an alternative, Cordesman offered a series of changes to make defense transformation affordable, but cited the difficult issue of maintaining adequate military personnel and offensive capability as the United States moves forward. Failure to address budgetary matters puts long-term strategic planning for U.S. security at jeopardy—let alone defense transformation.

Conclusions and Implications

This tour d'horizon demonstrates the need for all of us to expand and strengthen our understanding of the many sources of risk and the equally wide spectrum of consequences they imply. Beyond that, the event also underlined the need for leaders no matter what their realm—government, private sector, civil society and academia—to think in terms of a complex, differentiated approach to hedging against various risk in all forms. Above all, this examination reinforced the notion that in the future, winners and losers will be determined in large part by their capacity to hedge against risk and to exploit new opportunities that arise from the altered risk calculus.

The CSIS Global Strategy Institute will continue to pursue work in this area. We welcome your reactions, comments and questions.

Future Leaders and Risk

For some, the trip to this year's GSI anniversary conference was hard won. Among the notable leaders in the audience was an elite group of students from Pennsylvania State University's Smeal College of Business fresh from the previous week's victory in the CEO Survivor Competition, where top finishers were awarded an all-expenses-paid trip to Washington, D.C. and the GSI anniversary conference.

Smeal Survivor is the brainchild of a former CSIS intern who returned to Penn State inspired to launch a business strategy competition based on the call to leadership in the Seven Revolutions presentation. In its sixth year, the competition is a signature event at Penn State, testing the long-range strategic planning capacity of undergraduate students in the face of a changing world. The contestants assume the roles of corporate CEOs and, in front of an audience of over 300 peers, faculty, and mentors, must react not only to projected Seven Revolutions trends, but also to system shocks and disaster—the arrival of avian influenza or a major terrorist attack, for instance.

Students are judged on their presentations skills, strategic vision, adaptability, and mettle under fire when questioned by the judges—a group of actual corporate officers from top companies who play the role of a board of directors seeking to maximize profits and shareholder value. Andrew Bergstein, GSI advisor and professor at Smeal, leads the competition. In the future, Penn State and CSIS hope to expand the competition to other business schools and eventually to enact intercollegiate tournament play.



Erik Peterson with Penn State student Survivor competitors Dan Kokini (left) and Frank Howard (right).



To listen to audio from the event, please go to www.csis.org/gsi/annualconference/