

Resilience Conference (Cont. from 10)

needed improvement from the risk management community. First, he stressed the importance of “bridging the gap” between analysts and decision-makers, such that the producers of risk information can share it effectively with the consumers of the information. Second, Mr. Kolasky noted that risk analysts must develop an appreciation of simple analysis for complicated problems. The simpler the answer, the more likely it is to be transparent and defensible, and thus the easier it will be for the decision-maker to adopt. Third, risk analysts must better appreciate how their efforts impact the bottom line, because decision-makers tend to be most responsive to arguments that demonstrate achievable results. Finally, Mr. Kolasky called for the development of incentives and standards of excellence to build the human capital needed to support integrated risk management for homeland security.

Thomas DiNanno, President of Republic Consulting Group, continuing on the theme of needed improvements in the risk management community, said he had noticed a disconnect between those responsible for large regional infrastructure and those in Washington responsible for overseeing risk management programs. Having left the government for the private sector, Mr. DiNanno said he was sometimes stunned to hear security managers at the local or corporate level say they had never heard the names of certain critical Federal risk management officers.

Mr. DiNanno also pointed to the convergence of multiple regulatory schemes as an area of ongoing confusion and misunderstanding at the State and local level. Fixing the problem will not be easy because it requires multiple willing partners, he said, but not doing so undermines DHS’s credibility as a single agency. Mr. DiNanno also suggested the creation of a trade association for the critical infrastructure protection community to help resolve these issues and advance the community’s interests.

Mr. Paczkowski began his remarks by noting that since September 11, the homeland security community has been steadily “climbing the maturity curve” on the application of risk management concepts. While risk management principles were initially absent from security planning, he said, they are gradually becoming essential elements of more structured and deliberate planning for homeland security and preparedness. He said that State emergency management directors and homeland security advisors are increasingly grappling with how best to assess and manage risk as they work through their own planning processes, the identification of needed capabilities, and the allocation of limited State and local funding and Federal grant assistance.

Corey Gruber, Assistant Deputy Administrator for Federal Emergency Management Agency (FEMA’s) National Preparedness Directorate, provided the mid-morning keynote address. He

focused his talk on ways that risk management analysts can improve communication with decision-makers who must make choices within a constrained political environment. Policy suggestions must be “understandable and communicable,” he said, and they must be tailored to helping the decision-maker achieve his own goals. Since political appointees often stay in their offices for only a few years, detailing short-term achievable benchmarks can make a critical difference.

The last panel, moderated by Marc H. Siegel, Commissioner, Global Standards Initiative at ASIS International, focused upon Private-Sector Perspectives, Standards Development & Case Studies. Dr. Siegel began his remarks by noting that the emergence of resilience as a key concept is being driven by a growing recognition that dividing up homeland security issues into different silos of security management, crisis management, continuity management, and recovery management does not work and is unnecessarily expensive.

The development and growth of international standards is a major part of this effort, and he warned conference participants that they have to be engaged in the discussion or risk not being heard at all. Time after time, he said, Americans fail to show up and participate in international discussions about risk management and business continuity standards. Standards

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Joint George Mason University and Department of Homeland Security Initiative on Critical Infrastructure Higher Education Programs

The Center for Infrastructure Protection and Homeland Security (CIP/HS) launched a new critical infrastructure and higher education initiative in partnership with the Department of Homeland Security (DHS) Office of Infrastructure Protection.

“The new initiative will create a comprehensive, unified education and training system that produces and sustains the leaders and workforce required to ensure the protection and resilience of the Nation’s critical infrastructure,” said Mick Kicklighter, CIP/HS Director.

“Protecting and ensuring the resilience of our Nation’s critical infrastructure is a top priority for the Department of Homeland Security. It is an important and evolving mission area that is vital in our efforts to preserve our way of life,” Todd Keil, Assistant Secretary for the Office of Infrastructure Protection said. “The Critical Infrastructure Higher Education initiative will help to establish the solid academic foundation needed to shape the homeland security workforce for the future.”

The Office of Infrastructure Protection — which is funding the higher education initiative — leads the coordinated national program to reduce risks to the Nation’s critical infrastructure posed by acts of terrorism and to strengthen national preparedness, timely response, and rapid recovery in the event of an

attack, natural disaster, or other emergency.

“Infrastructure protection professionals must be able to assess risks and vulnerabilities and develop mitigation strategies. They must also be skilled in exercising leadership in crisis situations, enabling them to respond to catastrophes, rapidly restore critical capabilities, and prioritize rebuilding, if required,” Keil said. “Courses that address critical infrastructure must be part of a holistic approach to homeland security education.”

Many of the disciplines engaged in ‘infrastructure protection’ such as security, law enforcement or emergency management currently have their own supporting education systems for their respective subject matters. These disciplines are focused on evolving their own education and training programs. “Consequently, most of the focus is targeted to the respective profession in which it occurs, or is delivered within the context of a specific industry sector,” Kicklighter said. “There needs to be an ongoing commitment to establish standard educational and training programs and to encourage the adoption and incorporation of these programs within the education systems, and that is exactly what the GMU-DHS partnership initiative does.”

The project includes an assessment

of existing critical infrastructure degrees, courses, and teaching materials across higher education. The assessment will summarize offerings in higher education, identify best practices, ascertain unmet needs, and offer recommendations for improving infrastructure protection education. CIP/HS will subsequently develop a new higher education curricula focused on infrastructure protection that will serve as a prototype for graduate courses and certificate programs. This curricula could be taught at colleges and universities in their schools of business, public policy, engineering, science, health, government, and other departments.

Potential future activities include development of a certificate program based on the higher education infrastructure protection curricula and modification of an executive master’s degree to provide an infrastructure protection concentration.

“Throughout this process, external experts from academia, industry, and government will review, critique, and provide advice on the project from their various perspectives,” Kicklighter said. The resulting courses will be non-proprietary and the materials will be made available to any interested university or institution.

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James Madison University Presidential Remarks

The following remarks were delivered by Linwood H. Rose, President, James Madison University on the occasion of the 5th Annual Spring Symposium, Institute for Infrastructure and Information Analysis (IIIA), National Academies-Washington, DC. May 12, 2010.

General Kicklighter, thank you for being in attendance this evening. Colonel Barlow and Professor Skelley congratulations on your awards presented earlier in the program.

James Madison University (JMU) through the Institute for Infrastructure and Information Assurance developed a unique partnership with the Federal Facilities Council of the National Academies in 2006 to host a series of symposia focused on key issues in national and homeland security.

Past symposia have examined:

- 2006 “Homeland Security: Engaging the Frontlines”
- 2007 “Cascading Infrastructure Failure Avoidance and Response”
- 2008 “Fostering Public-Private Partnerships”
- 2009 “Protection of Large Facility Complexes”

And this year our subject is “Safe, Secure and Sustainable Facilities.”

Thank you Ms. Stanley for your work on behalf of the Federal Facilities Council and the National Academies in helping to organize the event and for your commitment to the partnership with JMU.

Mahatma Gandhi said “You must be the change you want to see in the world.” At James Madison University we take that to heart. In fact, our theme for the last several

years has been *Be The Change*. Our mission is to prepare students to be educated and enlightened citizens who lead meaningful and productive lives. We take the word “citizen” quite seriously in that we expect our students to leave our university with a sense of obligation to serve the communities in which they live and work.

We encourage each student to be a change agent for the public good. We realize that not all will represent the change that they would like to see in the world, but we want to prepare them for that role.

I fear that there are too many of us who wait for the government to tell us what to do. To wear our seat belts, to stop smoking, to eat properly, to control the thermostat and so on. What has happened to self-reliance and personal responsibility, personal initiative and personal action?

On matters of the environment, I am pretty sure that if we wait for governments to tell us what to do we are in deep trouble because political forces will not do what is necessary in the time we have.

And I don't think business can do it, because of the fixation on short-term financial gain. Although I do believe that some businesses are recognizing that long-term viability, and sustained prosperity, depends



Mick Kicklighter, Director of Mason's CIP/HS, and JMU President Linwood Rose. Photo courtesy of JMU IIIA.

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JMU Remarks (Cont. from 13)

on socially responsible business decisions.

This requires cultural change and you don't accomplish that through law or directive — it can only come through education. And we had better get busy, because this isn't just about our personal consumption habits, it is about numbers as well. Tom Friedman in *Hot, Flat and Crowded* has pointed out, that part of the issue today, and in the future, is global population growth.¹ Currently, there are 1.3 billion people in China alone. In 2020 there will be 1.5 billion.

If one visits Brazil, China, Indonesia, countries that we used to think of as developing nations, you cannot help but notice that the people of those countries want to live like us. Like Americans — with our conveniences, our technology and our comforts. You cannot blame them. These conveniences, associated with prosperity, devour energy, natural resources, land, and water and emit waste. Friedman claims that the reality is that the planet cannot support a world full of people living like Americans — at least the way we live now.

Each month we are adding 7-8 million people to the planet. A member of our JMU faculty helped me understand the implications of that number. New York City has 8 million residents. The Commonwealth of Virginia has 8 million residents. We are adding the equivalent of the Commonwealth of Virginia, with all of its people, its

infrastructure, its consumption and its waste to this planet each month!

We cannot wait for the government to tell us what to do! That is why at JMU we have adopted the initiative “Stewardship of the Natural World.” There is nothing really wrong with the term “environmental sustainability,” but we wanted to take a more comprehensive view.

We have joined with other colleges and universities in this effort. As of December 2009, 665 colleges and universities in the 50 states and the District of Columbia had become signatory schools of The American College and University President's Climate Commitment.²

These schools represent 5.6 million students — one-third of the higher education population in the United States. As the ACUPCC's latest annual report indicates, “Signatory schools are showing the rest of society how to work quickly toward climate neutrality. They are dramatically reducing operating costs, training clean energy workers, and spurring innovation in energy efficiency, transportation, and renewable power. They are teaching tomorrow's architects, business

JMU President Linwood Rose. Photo courtesy of JMU IIIA.



leaders, policy-makers, engineers, economists, and product designers how to operate society sustainably.”

The Hippocratic Oath taken by the medical profession promises at a minimum “to abstain from doing harm.” The Boy Scouts of America, teach young men to always leave a camping site better than they found it. The University wishes to model good environmental stewardship behavior and practice so that we might meet the needs of the present without compromising the ability of future generations to meet their own needs. We have adopted what we refer to as a Defining Characteristic for the University: *The University will be an environmentally literate community whose members think critically and act, individually and collectively, as model stewards of the natural world.*

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¹ Friedman, Thomas L. *Hot Flat and Crowded*, New York: Farrar, Straus and Giroux, 2008.

² American College & University President's Climate Commitment, 2009 Annual Report.

SARMA's Fourth Annual
Security Analysis and Risk Management Conference

Tuesday, October 5, 2010 at 8:30 am
to
Thursday, October 7, 2010 at 12:00 pm

“The Road to Resilience: A Risk-Based Approach”

Including presentations and panel discussions on:

Infrastructure Resilience
Community Resilience
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Resilience Conference (Cont. from 11)

change with time, he said, and it is important that Americans be at the table to share their perspectives on effectiveness and utility. Peter Gallant, Chief, Corporate Security, World Bank Group, opened his discussion by talking about how the World Bank is unique in that it does not have to abide by any national or State-level standards. Nevertheless, the World Bank answers to an international board of directors and, like other major organizations, requires a risk management strategy. Although the World Bank previously had a small risk management program, after September 11, it expanded dramatically.

In 2001, the World Bank began an analytical process to start identifying risks and potential methods of mitigation. But implementing the program was difficult because of a concern that the organization would simply react to international events and fail to focus in on its own unique requirements. Instead, the World Bank took a “slow paced approach to building a resilient program based on the criticality of the business needs of the Bank,” Mr. Gallant said.

Key to the World Bank’s initiative was to first distinguish between critical and non-critical business functions. For instance, the Bank operates major international bond trading and portfolio management programs, many of which implicate international political risk challenges in addition to concerns about physical or cyber destruction or disruption. “We looked at our program from a holistic approach and triaged it down to two business

(Left to Right) Marc H. Siegel, Commissioner, Global Standards Initiative at ASIS; Peter Gallant, Chief, Corporate Security, World Bank Group; and Alex McLellan, Principal Analyst at the Homeland Security Studies and Analysis Institute.

Photo courtesy of Liz Salice.



lines that we’re looking to support,” Mr. Gallant said. The World Bank also decided to de-emphasize physical protection of its facilities in lieu of developing redundancy programs to continue operations in a crisis.

Alex McLellan, Principal Analyst at the Homeland Security Studies and Analysis Institute, began his talk by noting that while there are multiple definitions of resilience that have not yet been resolved, the concept has been around for a long time as “a holistic approach to the management of disruptive events.”

Looking at communities in coastal Louisiana, Mr. McLellan noted that while in some parishes no oil from the Deepwater Horizon had reached the shores, the local economy was already reeling because the oil and fishing economies have come to a standstill. Yet these areas typically demonstrate “inherent resilience” in that they are challenged every year

by meaningful weather events. Whether they will now demonstrate “adaptive resilience” in the face of this new challenge presents an important topic for further research. ♦

A version of this article appeared in the June issue of The Risk Communicator, SARMA’s monthly newsletter.

JMU Remarks (*Cont. from 14*)

Like any other organization, we have a structure to focus our efforts. We have an Institute that reports to the president's office. We have working committees that address the curriculum, research, policies and practices, consumption, waste, and transportation.

Initiatives include Valley 25x'25, Virginia Wind Energy Collaborative, and the Virginia Coastal Energy Research Consortium. JMU is also home to the Alternative Fuel Vehicle Lab that provides opportunities for students to convert and adapt vehicles to operate on renewable fuels. The 25x'25 initiative is federally funded as a regional model with the goal of using twenty-five percent renewable energy sources by 2025.

Environmental stewardship is not one more initiative in a string of initiatives. It is not one more ingredient in our stew pot. Instead it is an approach to life. It is transforming how we live and therefore everything about us is redefined. For example, the university's new vehicles must be hybrid, biodiesel, or electric. Serving trays were eliminated in the dining halls, electronic dashboards showing immediate water and power usage are visible in our buildings. New construction is LEED certified. We just completed a gold LEED dining hall and we are presently planning a residence hall renovation and we are targeting a platinum certification for that project.

A focus on sustainability requires us

to innovate and to be resourceful. It drives us to imagine. It leads us to opportunity. We can begin now and it will be fun, or we can wait and then the fun will yield to fear and desperation.

"Authentic" stewardship is about undertaking this because it makes life good — not because it makes us look good.

This whole effort is about what people do, not what people say. I believe if we live in a manner that respects our natural world, and that ensures a high quality of life for future generations, then faculty and staff will be drawn to us, students will select us, and donors will want to support us.

Some have suggested that we use a sustainability commitment to make us distinctive. I want no part of that. In fact, if by being good stewards of the natural world, we differentiate ourselves from others we have a problem of immense proportion, because our action alone is insufficient to right this world.

We must undertake this journey to model the way, to cut a path, to make it easier for others to elect the same course. This is about sharing everything we learn and know. After all, we are educators!

The beauty of discovering fire or the wheel is not in the initial euphoria of discovery, it is in the sharing of these wonders to improve the human condition. So to must it be with building a new way of living as part of nature, rather than aiming to

be its master.

We have an opportunity to lead the world in developing laws, policies and actions that can ensure a sustainable planet. But despite our knowledge and our ability to innovate, our political system seems to be in a state of gridlock, unable to cope with grand challenges.

So...we each must be the change we want to see in the world! At JMU we are educating people to do just that. Thank you. ❖

KEPCO *(Cont. from 3)*

develop MS and Doctorate degree programs in nuclear engineering. Beginning in the summer of 2012, some select classes will be held at George Mason's Fairfax Campus. The curriculum will provide special courses on the development of core knowledge of Systems Engineering and on building international human networks. The specific curriculum is currently under development. ❖

For more information about this exciting new program, contact Joan Rothenberg at jrothen2@gmu.edu.

InfraGard *(Cont. from 4)*

and Office of Commonwealth Preparedness with their important missions. ❖

For more on the Virginia Fusion Center please see: <http://www.vsp.state.va.us/FusionCenter>. For more on the Office of Commonwealth Preparedness and the VCIPRSP please see: <http://www.commonwealthpreparedness.virginia.gov>.

Cybersecurity *(Cont. from 5)*

emerging threats from sophisticated spear-phishing and social network attacks. The group has also discussed the implications of recent international cybersecurity incidents such as the Google attacks and how to strike the delicate balance between ensuring security while also promoting openness and freedom globally. ❖

Education *(Cont. from 12)*

One of the key objectives of the CIP/HS Education and Training Program is to develop professionals who are equipped with the education and skills to understand the Nation's critical infrastructure protection and resilience missions. The Program fosters the importance of collaborative work among critical infrastructure owners and operators and the public sector. "The critical infrastructure mission demands a professional, highly educated workforce and cadre of leaders at all levels of government and in the private sector. We are looking forward to partnering with GMU in this very exciting higher education initiative," Keil said. ❖

For more information on the DHS Office of Infrastructure Protection: www.dhs.gov/criticalinfrastructure.

Should you have questions or want to participate in this project, please contact Devon Hardy at (703) 993-8591 or dhardy1@gmu.edu.

Information Sharing (*Cont. from 9*)

different approach to the issue, arguing that information-sharing is not a problem/solution issue but a deep-seated cultural one. Back in the mid-1990s, he pointed out, few people in government talked about homeland security on a daily basis. While this has since changed, many old attitudes remain, calling for improved public education about the importance and role of the Nation's homeland security posture. Like many of his colleagues on the day's panels, Mr. Lacombe also emphasized the need for metrics able to gauge success in information-sharing.

Closing out the discussion, Tina Gabbrielli, Director of Risk Management and Analysis at DHS, provided an overview of what DHS has learned about the value of information sharing and risk management and what the Department is doing to achieve both. The recent QHSR emphasized the importance of risk management to inform strategic, policy and budgeting decisions and called for the development of a homeland security national risk assessment. Ms. Gabbrielli discussed what the Department is doing to establish an integrated approach to risk management, including building a common lexicon, developing guidelines,

creating risk data information sharing systems, and building partnerships. These efforts are intended to create a shared understanding of homeland security risk and ensure unity of effort across the homeland security enterprise. ❖

A version of this article appeared in the April and May issues of The Risk Communicator, the monthly newsletter of the Security Analysis and Risk Management Association (SARMA).

DHS MS&A (*Cont. from 6*)

Another interesting outcome from the workshop was the attendance of a diverse number of key stakeholders in technology and homeland security. Attendees included representatives from: DHS-S&T, the National Infrastructure Simulation and Analysis Center (NISAC), National Laboratories such as Oak Ridge, Argonne, Los Alamos, Sandia, and Lawrence Livermore, several national and international organizations, universities, government entities such as the DoD Office of Secretary of Defense and the Defense Advanced Research Projects Agency (DARPA), as well as representatives from industry and the private sector.

Outputs from the workshop will include a Final Report of the 2010 workshop and a related Broad Area Announcement (BAA) is expected to follow from DHS S&T. These outputs will help DHS S&T formulate near- and long- term investment decisions as well as research strategy, plans, and objectives for modeling and simulation of the Nation's critical infrastructure and key resources. ❖

The Center for Infrastructure Protection works in conjunction with James Madison University and seeks to fully integrate the disciplines of law, policy, and technology for enhancing the security of cyber-networks, physical systems, and economic processes supporting the Nation's critical infrastructure. The Center is funded by a grant from the National Institute of Standards and Technology (NIST).

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