AGENDA

Discussion of current progress towards HSNRC

Background
Context within the QHSR
HSNRC Process
Connection with Enterprise Report
Risk Assessment process
HOMELAND SECURITY NATIONAL RISK CHARACTERIZATION

In support of the Quadrennial Homeland Security Review

QHSR Requirements

Implementing Recommendations of the 9/11 Commission Act of 2007

“Each quadrennial homeland security review shall be a comprehensive examination of the homeland security strategy of the Nation, including recommendations regarding the long-term strategy and priorities of the Nation for homeland security and guidance on the programs, assets, capabilities, budget, policies, and authorities of the Department.”
HOMELAND SECURITY STRATEGIC ENVIRONMENT ASSESSMENT

Homeland Security Threat Estimate

- Threats—phenomena that compromise US homeland security.
- Comprehensive assessment of the variety, scope, breadth and types of threats the Nation faces.
- Finalized Sept 2016

Homeland Security Trends Review

- Trend—changes in the strategic environment that affect our ability to achieve our missions.
- Comprehensive exploration of trends that may advance or hinder the achievement of homeland security strategy and missions.
- Finalized Aug 2016

Homeland Security National Risk Characterization

- Risk—the potential for an unwanted outcome.
- Comprehensive characterization of the threats and hazards addressed by DHS to identify the greatest risks to homeland security.
- Finalized March 2017
FIGURE 5-1 Spectrum of traditional risk analysis methods.
What are National Risk Assessments?

• Systematic, comprehensive presentation of risks presumably to inform decisions about them
  • Typically relative likelihood vs relative impact
• A number of countries have been performing these (national risk registers) and publish them
  • Notably, England, Sweden, Netherlands, New Zealand, and others
  • Also, the World Economic Forum provides a judgment-based assessments
• Focus is on residual risks – the risks that remain given current programs
The HSNRC summarizes the current state of knowledge for a set of strategically relevant threats and hazards for the Department of Homeland Security that present significant residual risk to the nation. The information can help the Department identify issues for which greater understanding of risk is required or where deeper analysis is needed to develop and evaluate new risk management choices.
• **Goal:** Analyze and assess threats and hazards to identify the most significant Homeland Security risks to the Nation

• **Five Phased Approach:**
  - Consider 2012/2013 HSNRC Lessons Learned
  - Establish methodology and protocols
  - Select threats and hazards
  - Data collection and analysis
  - Comparative analysis

• **SPAR/Strategy and Analysis (S&A) will have support from Department of Defense’s FFRDC - the National Defense Research Institute/RAND (NDRI)**
Risk assessment involves the process of identification and analysis of risks, and informing possible responses.
HAZARDS FOR HSNRC IDENTIFIED USING A THREE STEP PROCESS

Step 1: Generating a list of hazards to be considered

Step 2: Screening hazards

Step 3: Selecting a set of hazards to be included based on screening
<table>
<thead>
<tr>
<th>Terrorist Threats</th>
<th>Natural Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Attack on leadership</td>
<td>• Drought</td>
</tr>
<tr>
<td>• Attacks targeting critical infrastructure (e.g.,</td>
<td>• Earthquake</td>
</tr>
<tr>
<td>hazardous transport, airplane/airport, bridges,</td>
<td>• Flooding</td>
</tr>
<tr>
<td>dams, refineries, seaports)</td>
<td>• Hurricane</td>
</tr>
<tr>
<td>• Biological attack</td>
<td>• Space Weather</td>
</tr>
<tr>
<td>• Chemical attack</td>
<td>• Tsunami</td>
</tr>
<tr>
<td>• Electro-magnetic pulse</td>
<td>• Volcano</td>
</tr>
<tr>
<td>• Nuclear attack</td>
<td>• Wildfire</td>
</tr>
<tr>
<td>• Radiological attack</td>
<td></td>
</tr>
<tr>
<td>• Small arms/explosive attack on populations</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cyber Threats</th>
<th>Health Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Attack on critical infrastructure networks</td>
<td>• Transnational and multi-state communicable disease</td>
</tr>
<tr>
<td>• Attack that disrupts a government network</td>
<td>• Food animal disease outbreak</td>
</tr>
<tr>
<td>• Attack that steals sensitive government data</td>
<td>• Agricultural plant disease outbreak</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Infrastructure Hazards</th>
<th>Illegal Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Technical failure or industrial accident of</td>
<td>• Counterfeit goods</td>
</tr>
<tr>
<td>critical infrastructure caused by human error</td>
<td>• Human trafficking</td>
</tr>
<tr>
<td>or age</td>
<td>• Illegal migration</td>
</tr>
<tr>
<td></td>
<td>• Mass migration</td>
</tr>
<tr>
<td></td>
<td>• Transnational drug trafficking</td>
</tr>
</tbody>
</table>

**THREATS AND HAZARDS TO BE ANALYZED**
DEPARTMENT OF HOMELAND SECURITY ENTERPRISE REPORT
Laying the Foundation for the QHSR

Strategic

Trends

Risks

Operational

Capabilty Analysis

- Assess capabilities associated with DHS priority risk areas
  - Map programs in the budget to operational capabilities
  - Align operational capabilities (mapped to programs) to risk areas
  - Analyze capability gaps by solution type (Doctrine, Organization, Training, Material, Leadership, Personnel, Facilities)
- Recommend ways to mitigate risk for select threats and hazards
- Inform the Department’s Analytic Agenda
- Inform the Future Years Homeland Security Program
- Identify opportunities to improve DHS business management and operational planning processes
RISK MANAGEMENT

Tying Analysis to Action

Risk Management:
Process of identifying, analyzing, assessing and communicating risk and accepting, avoiding, transferring or controlling it to an acceptable level considering associated costs and benefits of any actions taken.

*DHS Risk Lexicon, 2010*
With honor and integrity, we will safeguard the American people, our homeland, and our values.