



Strategic National Risk Assessment 2015

Summary of Findings

November 2015

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Homeland
Security

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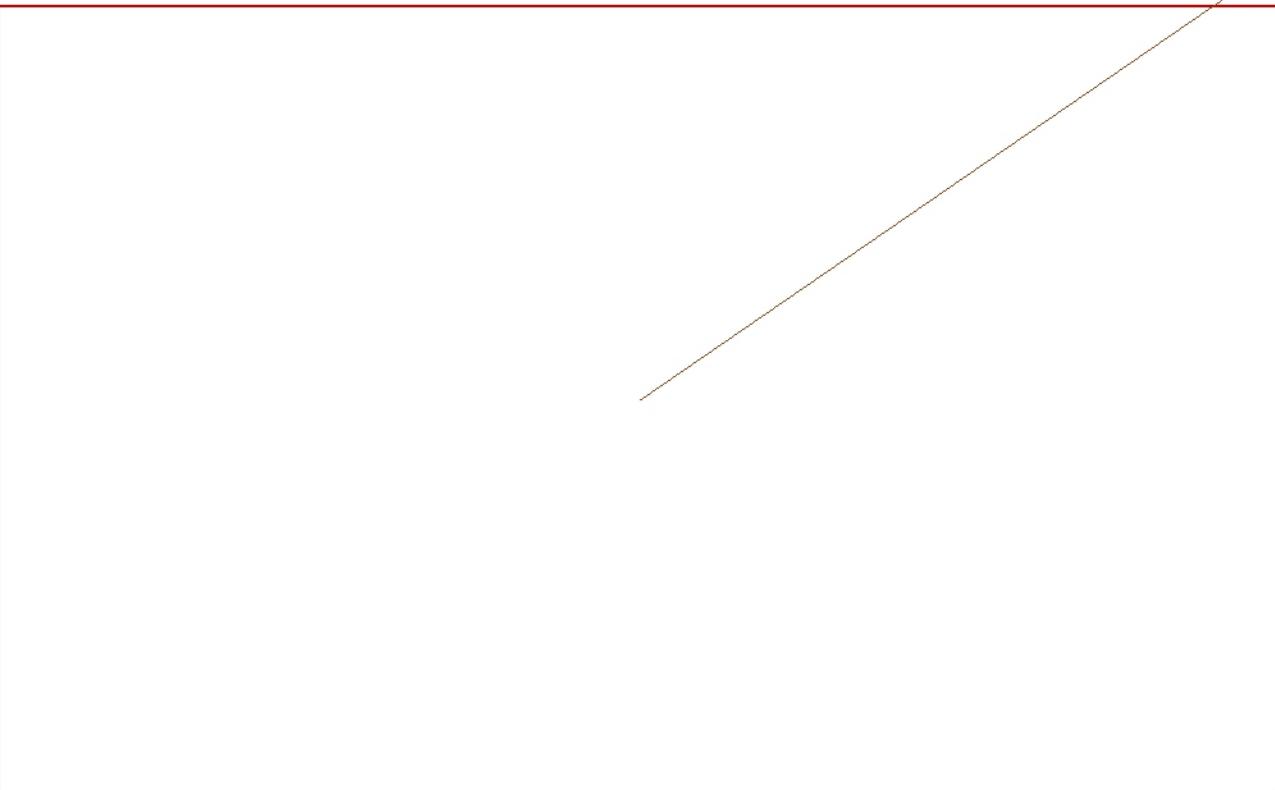
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Introduction

Our Nation faces a wide range of risks, from terrorism and disease to natural hazards and a changing climate. Risk is the potential for an unwanted outcome resulting from an incident, event, or occurrence, as determined by its likelihood and the associated impacts.¹ The Strategic National Risk Assessment (SNRA) provides general context and key findings related to threats and hazards posing significant risks to the United States.² Managing these risks is a shared responsibility that depends on unity of effort among whole community³ partners.

The SNRA supports a risk-based, all-hazards strategy for preparedness as directed by the Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA) and the continued implementation of Presidential Policy Directive 8 (PPD-8): National Preparedness. The information collected during SNRA is used to inform the National Preparedness Goal (the Goal)⁴ and drive the National Preparedness System.⁵ The technical materials compiled for the SNRA also support other risk assessment efforts conducted by whole community partners as appropriate, to include the Threat and Hazard Identification and Risk Assessment (THIRA) process.

The first iteration of the SNRA was accomplished in 2011 to inform the Goal.



Benefits of the SNRA

The SNRA⁷ provides:

- A risk-based foundation for the National Preparedness Goal;
- Support for capabilities-based planning, training, exercises, and evaluation across all mission areas: Prevention, Protection, Mitigation, Response, and Recovery; and,
- A set of findings and common descriptions of threats and hazards,⁸ allowing partners in preparedness to establish a shared understanding of risk across the homeland security enterprise and work more collaboratively.

Overview

The SNRA is conducted by the Federal Government to identify the threats and hazards that pose the greatest risk to the Nation⁹ and provide necessary context for those threats and hazards to support planning, which enhances national preparedness, security and resiliency. The SNRA informs and supports the National Preparedness Goal (the Goal), the National Preparedness System, the National Preparedness Report (NPR),¹⁰ and other efforts throughout the whole community to enhance the security and resiliency of the Nation. The National Preparedness System is based on “Identifying and Assessing Risk.”¹¹ The National Preparedness System is implemented at all levels of government, involves the whole community, and provides the mechanism to achieve the Goal.¹² Whole community partners use risk assessments to inform efforts to build and sustain capabilities, including planning, training, and exercises.

The 2015 SNRA process reviewed the national risk environment and included the following:

The SNRA findings include:

The threat and hazard identification process of the SNRA highlighted a number of additional threats and hazards, including:

While the SNRA represents a significant step toward understanding the Nation's threats and hazards, it contains data limitations and assumptions that will require additional study, review, and revision.

Strategic National Risk Assessment Scope

The SNRA evaluates risks from known threats and hazards with the potential to significantly impact the Nation's security and resilience.¹³ The SNRA assesses contingency events with defined beginning and endpoints, rather than persistent, steady-state risks.¹⁴

SNRA participants—Federal agencies, Department of Homeland Security (DHS) components, and the Intelligence Community, among others—developed a list of national-level threats and hazards (Tables 1 and 2) for consideration in the SNRA. The events are grouped into three categories: (1) natural hazards; (2) technological/accidental hazards; and (3) adversarial, human-caused threats/hazards.

To accomplish the 2015 SNRA, SNRA participants reviewed the unclassified publicly disseminated 2011 SNRA findings and determined whether or not their departments and agencies possessed data that would change the findings from the 2011 SNRA and/or identify new threats and hazards to those identified in 2011. In addition, the participants conducted research and analysis on available data sets¹⁵ to develop a baseline understanding of which national-level threats and hazards pose the greatest concern to the Nation. SNRA participants developed or updated risk summary sheets for quantitatively assessed risks (identified in Table 1), and conducted concise qualitative literature reviews for those risks where data was not available to complete a quantitative assessment (identified in Table 2).

For the purposes of the quantitative assessments, SNRA participants identified thresholds of impact¹⁶ necessary to create a national-level event.

- These thresholds were informed by subject matter expertise and available data.
- For some events, economic impacts were used as thresholds, while for others, fatalities or injuries/illnesses were deemed more appropriate as the threshold to determine a national-level event. In no case, however, were economic and casualty thresholds treated as equivalent to one another (i.e., dollar values were not assigned to fatalities).
- Event descriptions in Table 1 that do not explicitly identify a threshold signify that no minimum impact threshold was employed. This allows the assessment to include threats and hazards for which the psychological impact could cause it to become a national-level event, even though it may result in a low number of casualties or a small economic loss.¹⁷

The threats and hazards included within the scope of the SNRA are not limited to those with likelihood and impact data applicable to assessment within the comparative framework of the SNRA quantitative methodology. Table 2 lists additional threats and hazards identified by SNRA

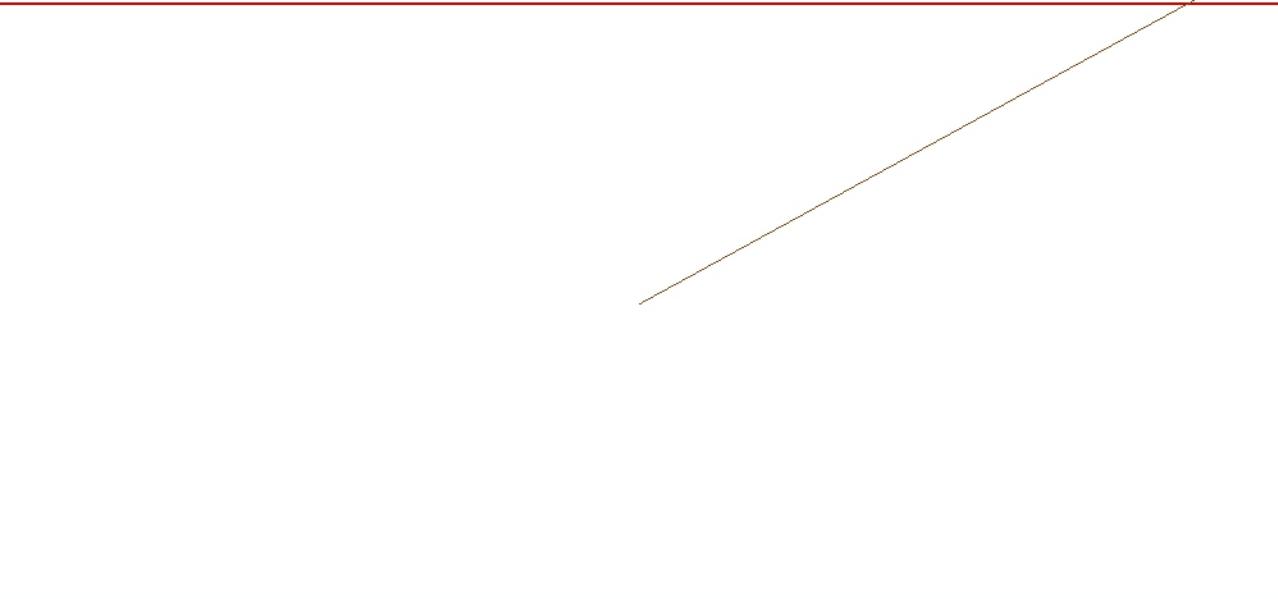
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participants as relevant to national preparedness that required consideration within a broader analytic framework than the comparative and quantitative methodology applied to the events of Table 1.

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Table 1: Threats and Hazards Quantitatively Assessed in the SNRA

Threat/Hazard Type	Threat/Hazard Description and Impact Threshold
Natural	
Animal Disease Outbreak* ¹⁹	An unintentional introduction of the foot-and-mouth disease (FMD) virus into the domestic livestock population in a U.S. state
(b)(5)	(b)(5)



Threat/Hazard Type	Threat/Hazard Description and Impact Threshold
Earthquake*	An earthquake occurs within the United States resulting in direct economic losses greater than \$100 million
Flood*	A flood occurs within the United States resulting in direct economic losses greater than \$100 million
Human Pandemic Outbreak**	(b)(5)
Hurricane*	(b)(5)
Space Weather***	(b)(5)
Wildfire*	(b)(5)
Technological/Accidental	
Biological Food Contamination*	Accidental conditions where introduction of a biological agent (e.g., <i>Salmonella</i> , <i>E. coli</i> , botulinum toxin) into the food supply results in 100 hospitalizations or greater and a multistate response
Chemical Substance Spill or Release*	Accidental conditions where a release of a large volume of a chemical acutely toxic to human beings (a toxic inhalation hazard, or TIH) from a chemical plant, storage facility, or transportation mode results in either one or more off-site fatalities, or one or more fatalities (either on- or off-site) with off-site evacuations or sheltering-in-place
Dam Failure*	Accidental conditions where dam failure and inundation in the United States result in one fatality or greater
Radiological Substance Release*	Accidental conditions where reactor core damage in the United States causes release of radiation
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	(b)(5)

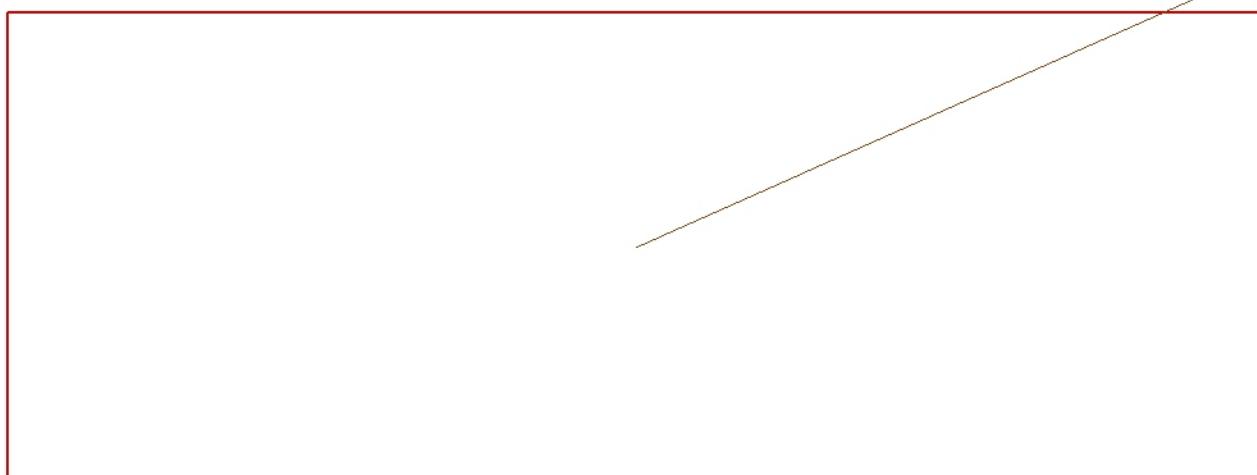
Threat/Hazard Type	Threat/Hazard Description and Impact Threshold	(b)(5)
Human Caused/Adversarial		
Aircraft as a Weapon**		(b)(5)
Armed Assault**		
Biological Terrorism Attack (non-food)*	A hostile non-state actor(s) acquires, weaponizes, and releases a biological agent against an outdoor, indoor, or water target, directed at a concentration of people within the United States	
Chemical/Biological Food Contamination Terrorism Attack*	A hostile non-state actor(s) acquires, weaponizes, and disperses a biological or chemical agent into food supplies within the U.S. supply chain	
Chemical Terrorism Attack (non-food)*	A hostile non-state actor(s) acquires, weaponizes, and releases a chemical agent against an outdoor, indoor, or water target, directed at a concentration of people using an aerosol, ingestion, or dermal route of exposure	(b)(5)
Explosives Terrorism Attack**		
Nuclear Terrorism Attack*	A hostile non-state actor(s) acquires an improvised nuclear weapon through manufacture from fissile material, purchase, or theft, and detonates it within a major U.S. population center	
Radiological Terrorism Attack*	A hostile non-state actor(s) acquires radiological materials and disperses them through explosive or other means (e.g., a radiological dispersal device or RDD) or creates a radiation exposure device (RED)	
*	Threats and hazards identified in the 2011 SNRA	
**	Threats and hazards Identified in 2011 and updated in 2015	
***	Threats and hazards identified in 2015	

Table 2: Threats and Hazards Qualitatively Identified in the SNRA

Threat/Hazard Type	Threat/Hazard Description
Natural	

(b)(5)

Threat/Hazard Type	Threat/Hazard Description
(b)(5)	
Tsunami* ²²	A tsunami with a wave of approximately 50 feet impacts the Pacific Coast of the United States
Volcanic Eruption* ²³	A volcano in the Pacific Northwest erupts impacting the surrounding areas with lava flows and ash and areas east with smoke and ash
Technological / Accidental	
(b)(5)	
Human Caused / Adversarial	
(b)(5)	
* ** ***	Threats and hazards identified in the 2011 SNRA Threats and hazards Identified in 2011 and updated in 2015 Threats and hazards identified in 2015



(b)(5) **Table 3: Cross-Cutting Threats and Hazards Identified for Study in the SNRA**

Threat/Hazard Type	Threat/Hazard Description
*	Threats and hazards identified in the 2011 SNRA
**	Threats and hazards Identified in 2011 and updated in 2015
***	Threats and hazards identified in 2015

The Current National Risk Environment

Analytic Approach

The quantitative analysis of the SNRA drew data and information from a variety of sources, including existing U.S. Government models and assessments, historical records, structured analysis, and judgments of experts from different disciplines. The information was used to assess the risk of identified incidents as a function of frequency²⁵ and impacts, specifically asking:

- With what frequency is it estimated that an event will occur?
- What are the impacts of the event(s) if it does occur?

Frequency was estimated as the potential number of occurrences or attacks, per year, which met or exceeded the established threshold²⁶ for the event. For the majority of events (including threats with unclassified analyses in the 2015 SNRA), frequency estimates were based on statistical analysis of historic data or taken directly from historical data where extensive records were available.²⁷ Chemical, Biological, Radiological, and Nuclear (CBRN) adversarial/human-caused frequencies were estimated primarily using elicitation from subject matter experts.²⁸

The SNRA examined the impacts associated with six categories of harm: loss of life, injuries and illnesses, direct economic costs, social displacement, psychological distress, and environmental impact. This multifaceted view of potential impacts draws attention to the broad and often interdependent effects of incidents that require whole community preparation and cooperation across the homeland security enterprise. For instance, fostering resilient communities relates to both mitigating human and economic impacts and addressing the psychological and social distress caused by the incident. Similarly, other types of resilience involve withstanding environmental and infrastructure degradations to ensure continued delivery of essential services.

The SNRA relied on the best available quantitative estimates of frequency and impact from existing U.S. Government assessments, peer-reviewed literature, and expert judgment. Where sufficient quantitative information was not available, events were assessed qualitatively. The estimates of the frequency and impacts for each of the events considered were compared where appropriate. No effort was made to create a single “risk judgment” for any event type, because it was deemed infeasible to aggregate all impact types into a single metric. Instead, the assessment treated impact categories separately (e.g., economic impacts are reported separately from fatality impacts). This allows stakeholders to apply their own expert judgments to the findings and decide how those findings should inform core capabilities in the Goal.

All sources and estimates were documented to promote credibility, defensibility, and transparency within the assessment. Uncertainty in frequency and impacts was explicitly

included in the analysis by representing low and high bounds in addition to best estimates. Examples of sources of uncertainty include incomplete knowledge of adversary capabilities and intent, variability in possible event severity and location, and lack of historical precedence.

The assessment was performed at a strategic national-level and provides the ability to draw rough comparisons and identify broad differences in risk across the quantitatively assessed events—within an order of magnitude. Given the uncertainty inherent in assessing risks at a national-level and the lack of information about some of the events included—many of which are likely to occur very infrequently—the assessment was designed to avoid false precision. Instead, the assessment identified only those differences in risk that were still significant despite the associated uncertainties.

The analysis of available information—even if that analysis is imprecise and contains a wide degree of uncertainty—supports better decision making, as long as key limitations and assumptions are noted. Participants designed the SNRA to capture the best information available regarding homeland security risks to inform the Goal and supporting preparedness efforts. There are two additional considerations for preparedness partners:

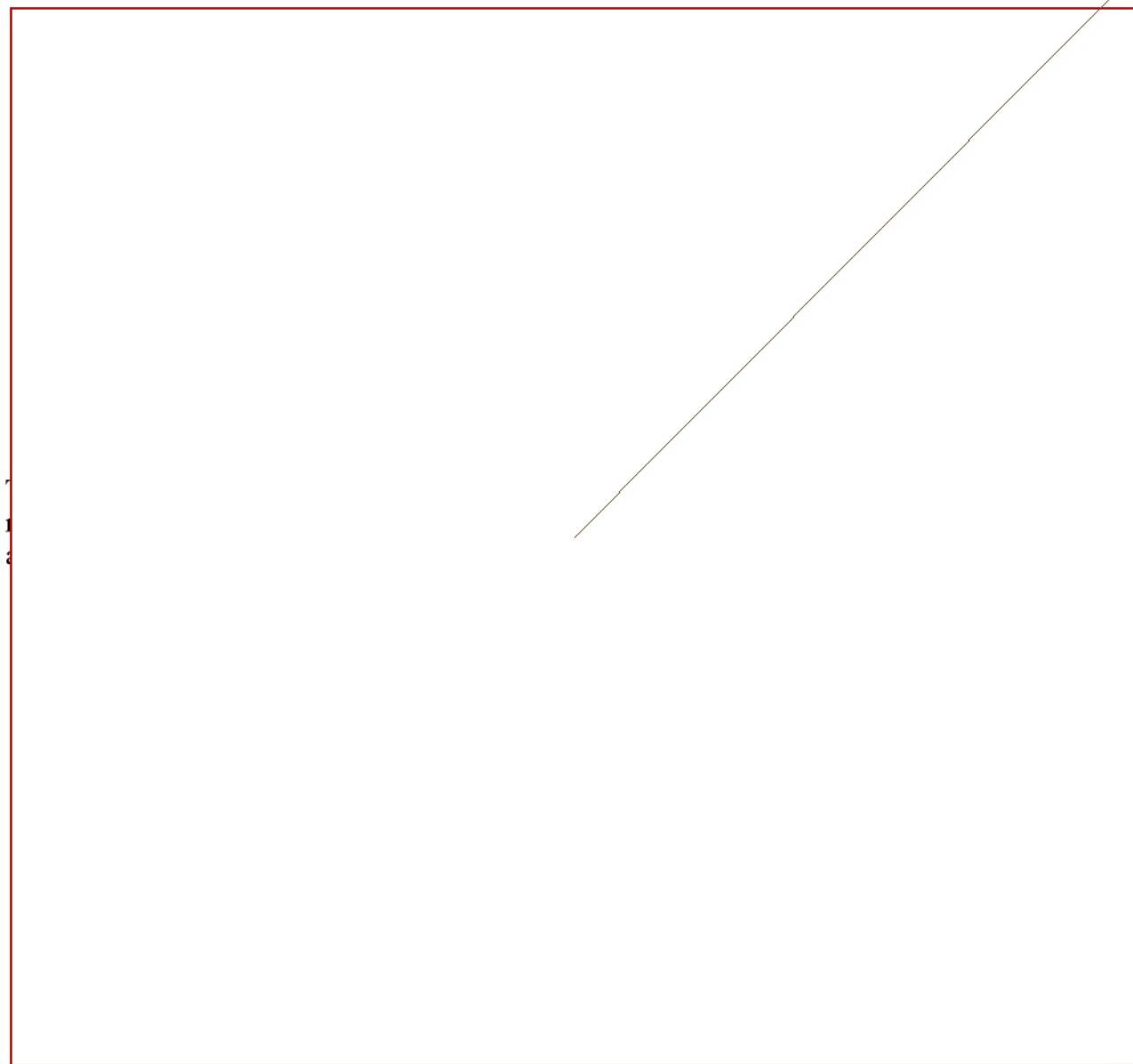
- This is a *strategic* national risk assessment. The SNRA addresses national risk based on total impacts to the Nation, not limited by geographic boundaries. As such, it does not present a full view of the risk facing communities. To complement preparedness planning, it is also necessary to consider local, regional/metropolitan, state, tribal, territorial, and insular area variations in risk.
- Given the emphasis in PPD-8 on contingency events with defined beginning and endpoints (e.g., hurricanes, terrorist attacks), the current SNRA does not explicitly assess persistent, steady-state risks like border violations, illegal immigration,²⁹ drug trafficking, and intellectual property violations, which are important challenges for DHS and the homeland security enterprise.

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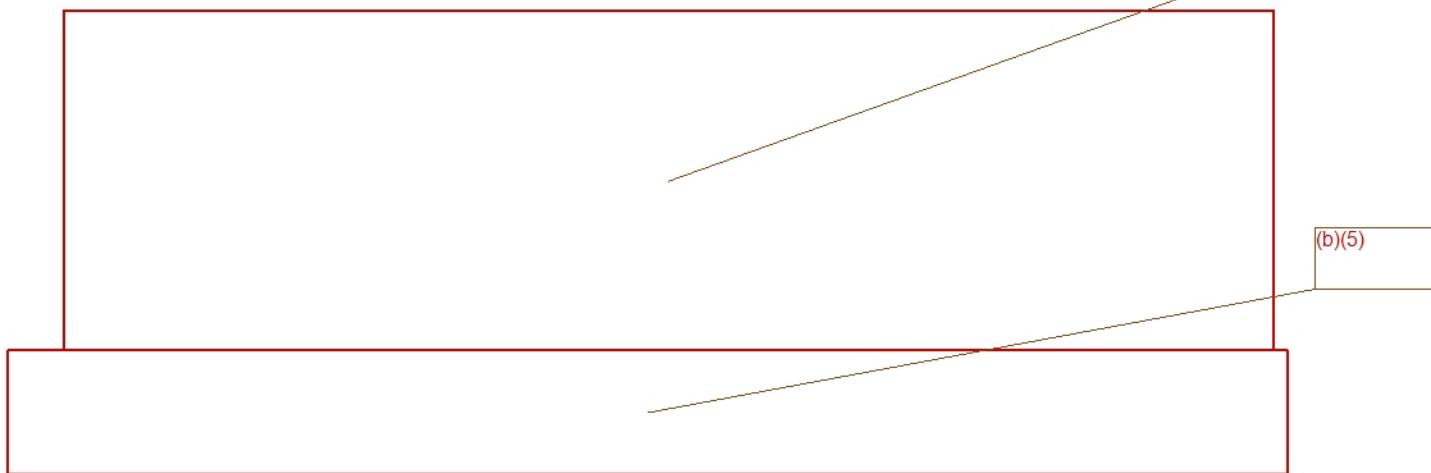
Findings

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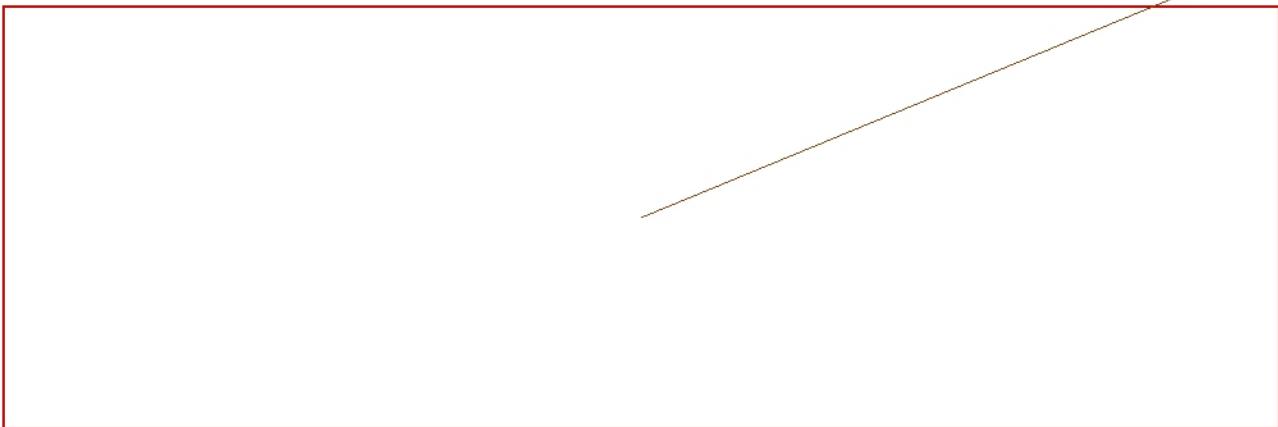
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SNRA participants identified a number of additional threats and hazards (Table 2), including:



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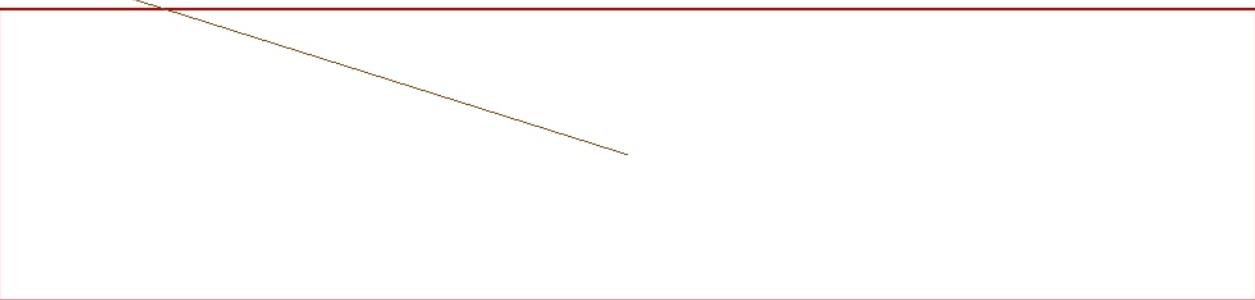
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Drivers and Evolving Threats

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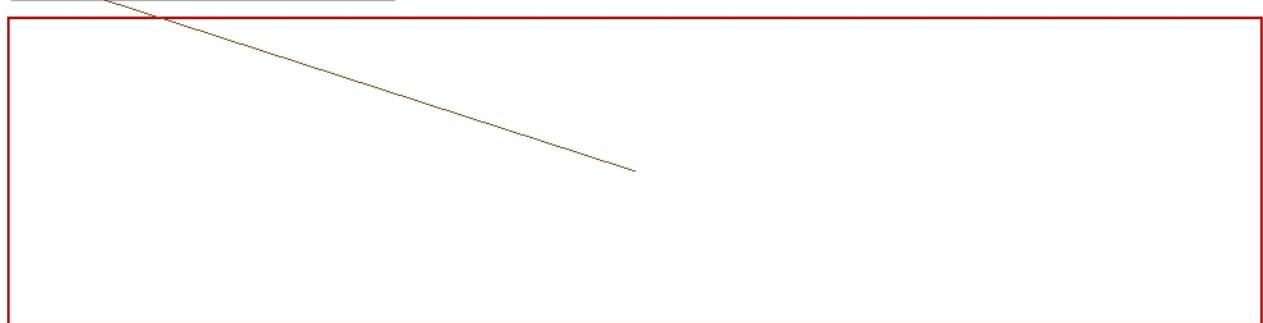


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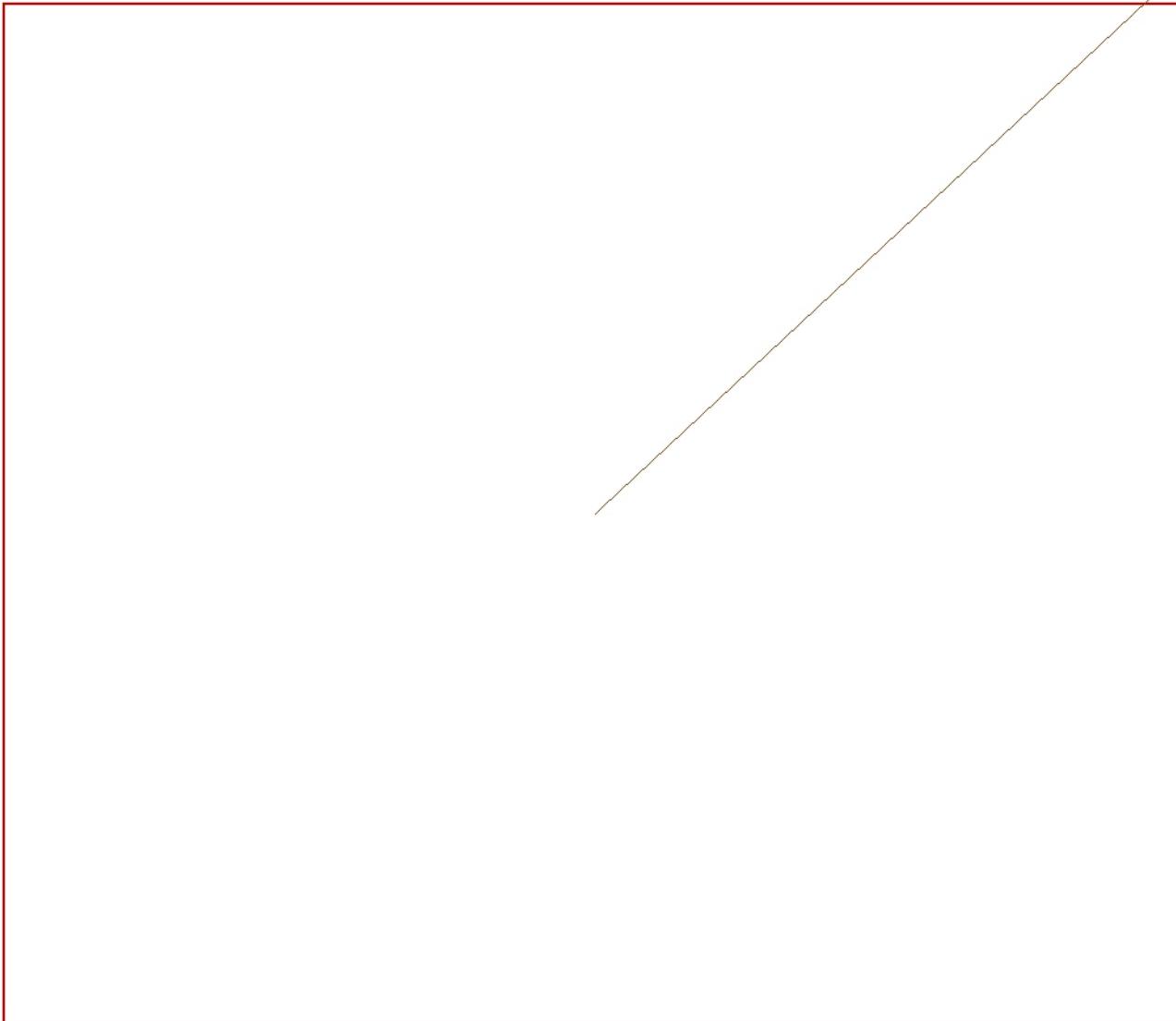
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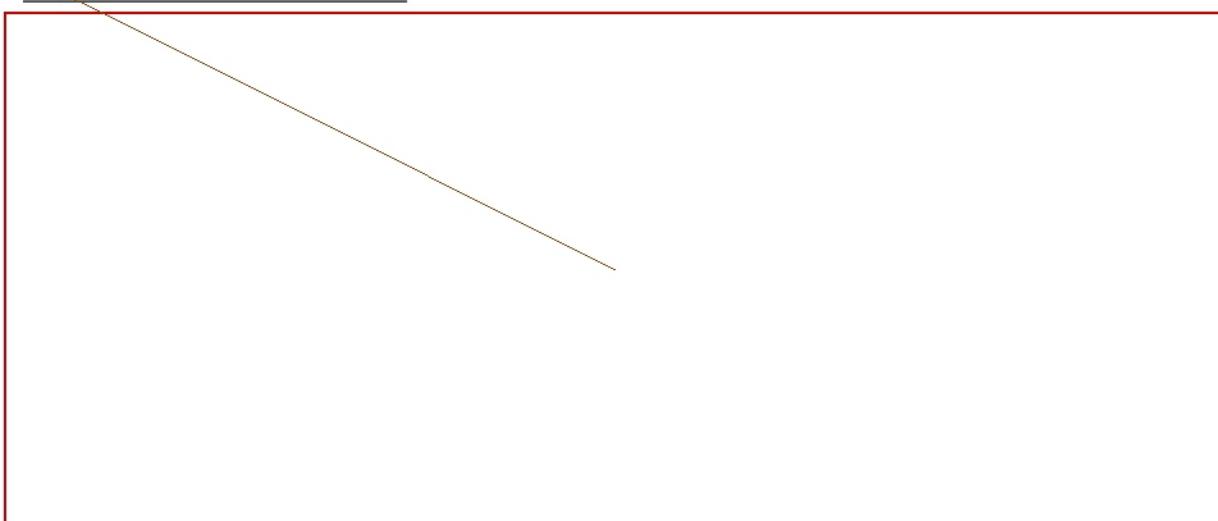
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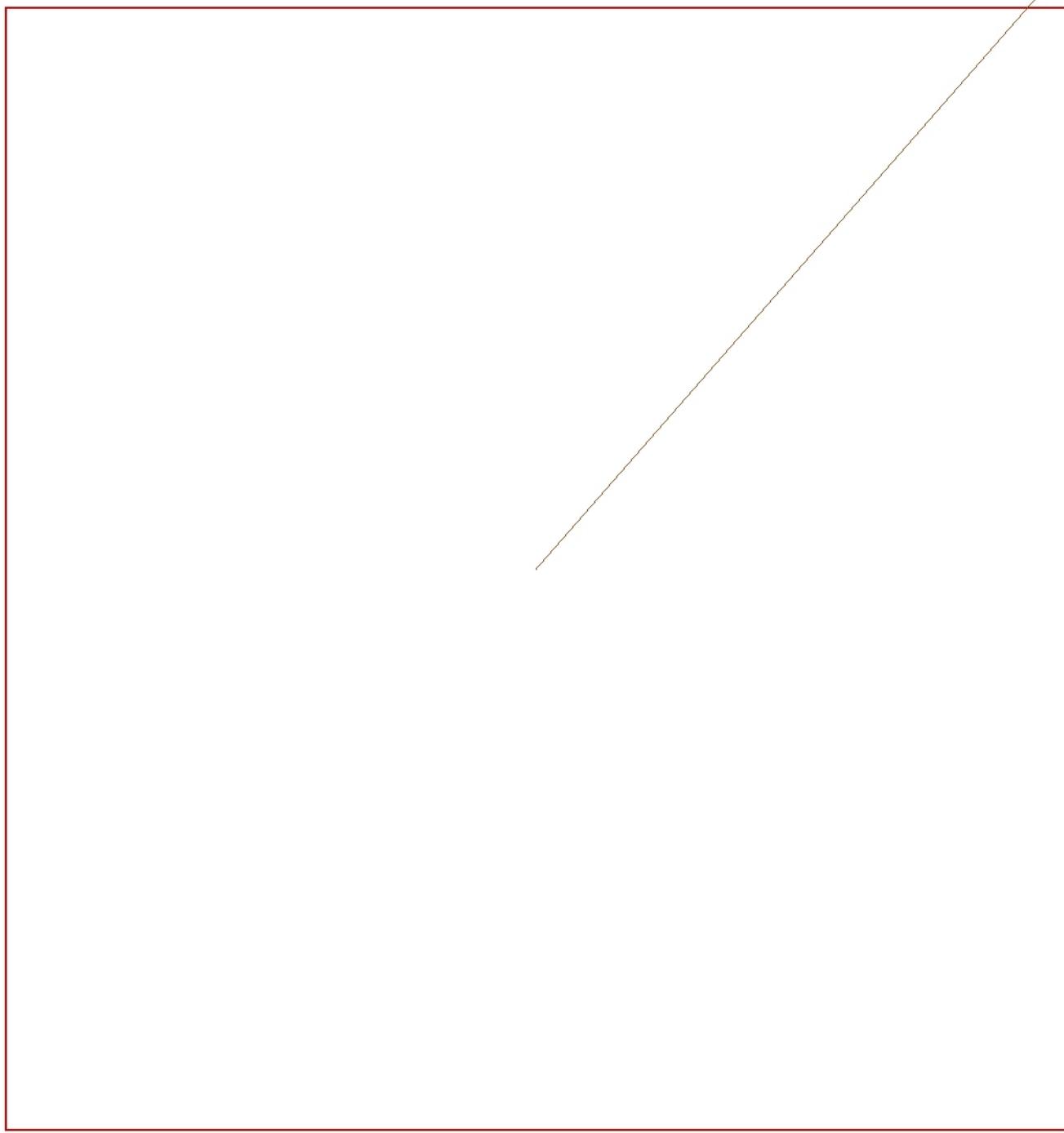


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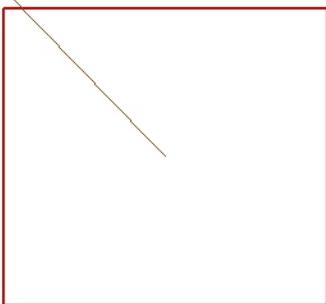


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2015 Strategic National Risk Assessment

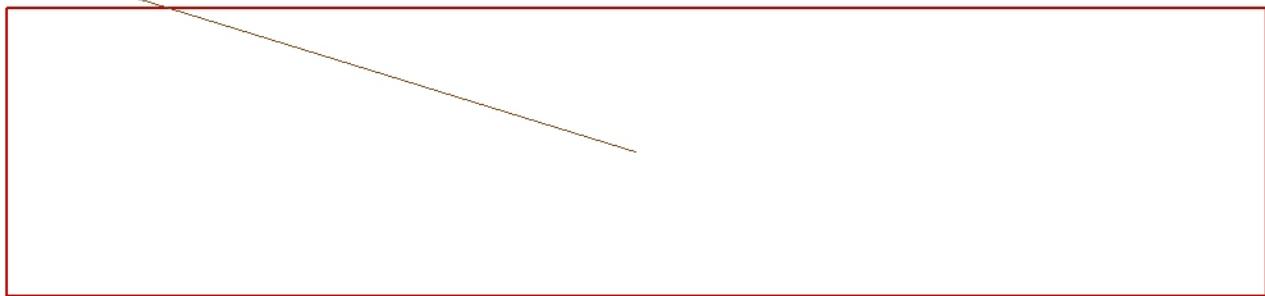


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2015 Strategic National Risk Assessment

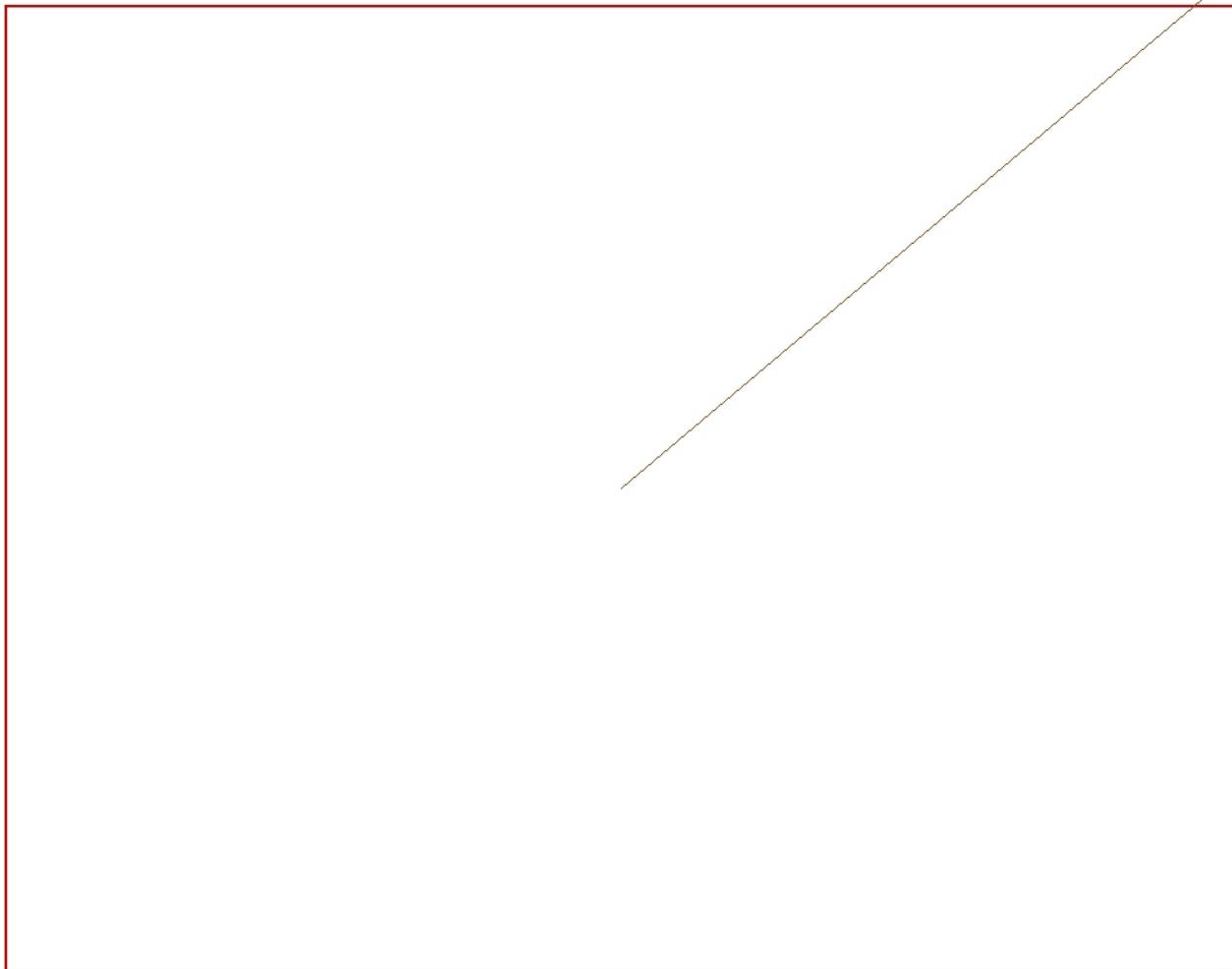


Threats and Hazards of Greatest Concern by Whole Community Partners

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Final Notes

The SNRA process provides a broad analysis of the risks from the varied threats and hazards faced by the Nation. As noted previously, the assessment finds that a wide range of threats and hazards pose a significant threat to the Nation, affirming the need for an all-threats/hazards, capability-based approach to preparedness planning. Many opportunities exist to implement broad preparedness strategies that cut across many different threats and hazards.

The SNRA is designed to inform prioritization and tradeoff decisions by enabling the analysis of which capabilities are likely to have an impact at reducing identified high-risk events. Using the SNRA, the homeland security enterprise can better understand which scenarios are more likely to impact them, what the consequences would be, and which risks merit special attention.

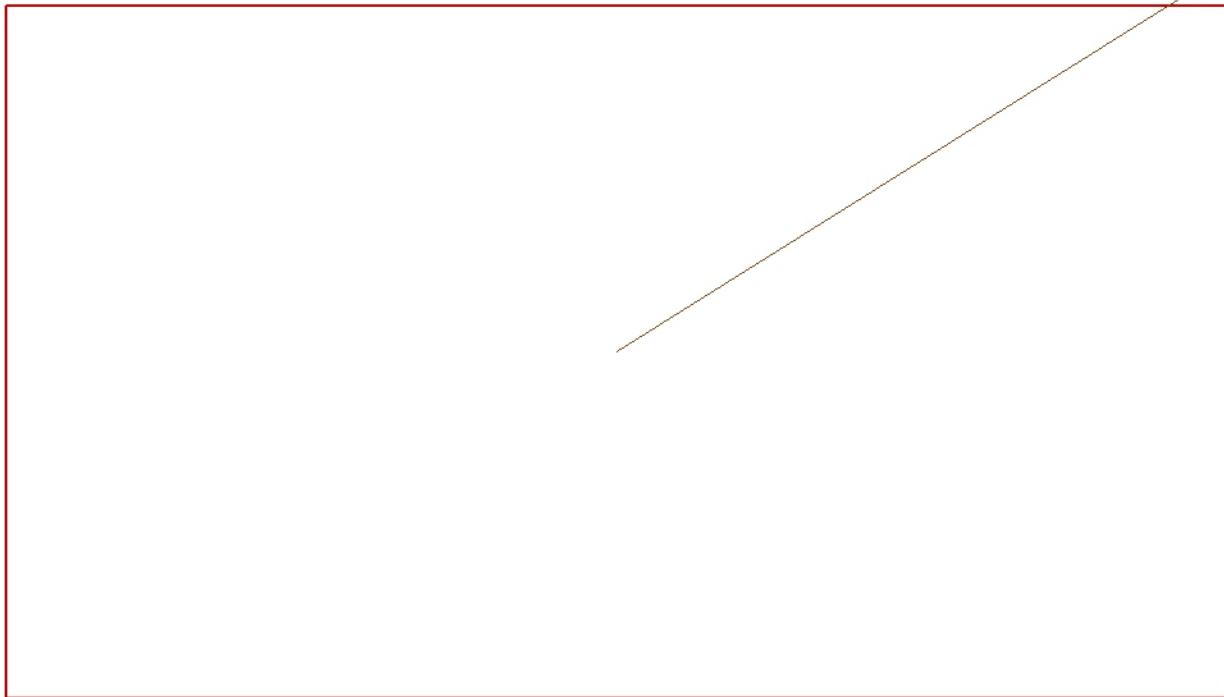
The SNRA process will continue to be implemented in support of PKEMRA and PPD-8 to inform the National Preparedness Goal, National Preparedness System, and its all-hazards, capability-based planning approach to national risk management. Although the development and update of the SNRA are important steps, further analysis through the use of regional- and community-level risk assessments will help communities better understand their risks and form a foundation for their own security and resilience. The Nation's preparedness is dependent on whole community partners understanding the risks they face across all levels of government. In conjunction with local, regional/metropolitan, state, tribal, territorial, insular area, and Federal partners, the SNRA process will be further implemented and refined in order to serve as a unifying national risk profile helping to facilitate preparedness efforts across the Nation.

**PRESIDENTIAL POLICY DIRECTIVE/PPD-8 REFRESH
STRATEGIC NATIONAL RISK ASSESSMENT
FINDINGS REVIEW**

May 29, 2015

The following represents a fully adjudicated draft of the 2015 Strategic National Risk Assessment (SNRA) Findings document. The SNRA supports a risk-based, all-hazards strategy for preparedness as directed by the Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA), and the continued implementation of Presidential Policy Directive 8 (PPD-8): *National Preparedness*. The SNRA is used to prioritize preparedness activities at the national level, inform the National Preparedness Goal (the Goal) and the National Preparedness System, and supports other risk assessment efforts conducted by the whole community. As part of the overall PPD-8 efforts, this draft of the 2015 SNRA Findings document contains updates to the publically disseminated version of the 2011 SNRA, and also reflects updates from the SNRA working group comprised of Federal partners, and the PPD-8 Implementation Team. The attached draft includes the following key changes from the 2011 publically disseminated version:

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The 2015 SNRA supporting documentation which substantiates the 2015 SNRA Findings is also being provided. Please contact the National Integration Center at PPD8-Engagement@fema.dhs.gov with any questions or feedback you may have at PPD8-Engagement@fema.dhs.gov. Thank you for your interest in this important endeavor and your broader support for national preparedness.

V/R,
National Integration Center



Strategic National Risk Assessment 2015

Findings
May 2015



Homeland
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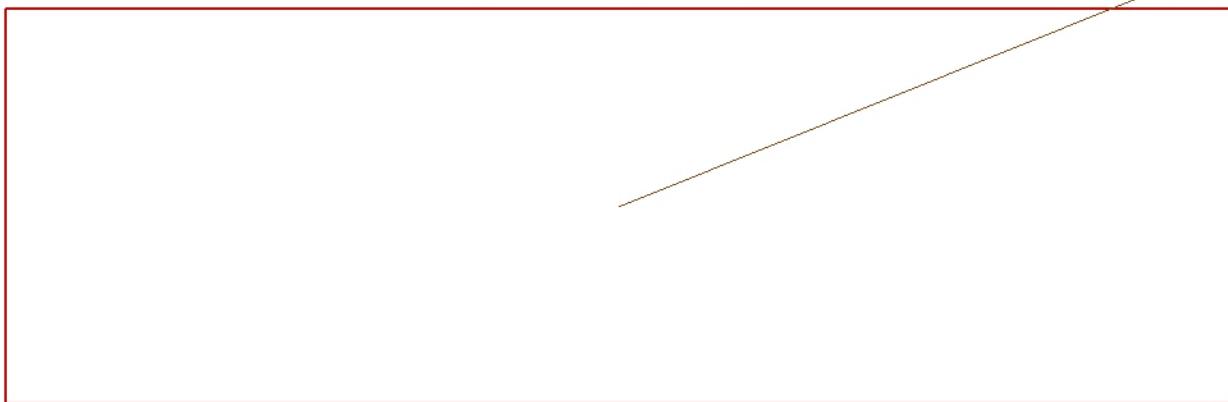
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Introduction

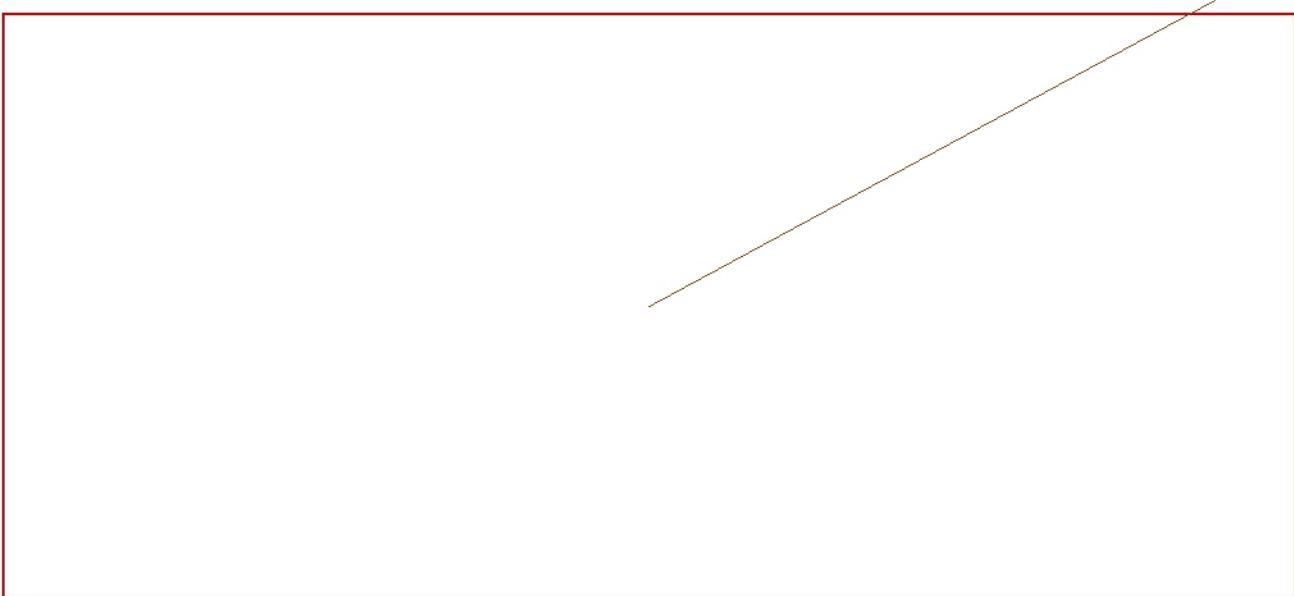
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The SNRA supports a risk-based, all-hazards strategy for preparedness as directed by the Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA) and the continued implementation of the National Preparedness System.⁴ This Assessment also supports other risk assessment efforts conducted by whole community partners as appropriate, to include the Threat and Hazard Identification and Risk Assessment (THIRA) process.

The SNRA⁵ benefits whole community partners by providing:



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The first iteration of the SNRA was accomplished in 2011 to inform the development of the National Preparedness Goal (the Goal)⁷. (b)(5)

Overview

The SNRA is a process implemented by the Federal Government to identify the threats and hazards that pose the greatest risk to the Nation⁹ and provide necessary context for those threats and hazards to support national preparedness planning. The SNRA informs and supports the National Preparedness Goal, the National Preparedness System, which is based on “*Identifying and Assessing Risk*”¹⁰, the National Preparedness Report (NPR)¹¹, and other efforts throughout the whole community to enhance security and resiliency. Whole community partners use risk assessments to inform efforts to build and sustain capabilities, including planning, training, and exercises.

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Strategic National Risk Assessment Scope

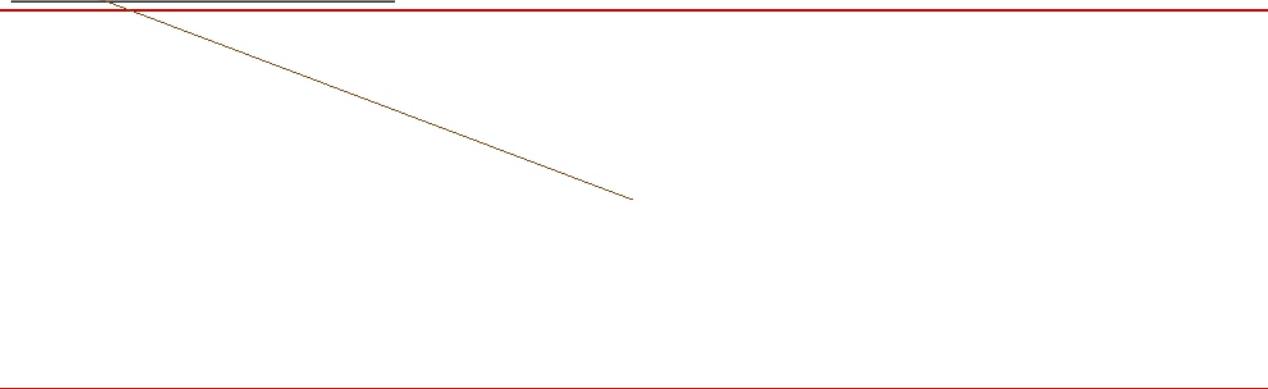
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The threats and hazards identified by SNRA participants are presented in Tables 1-3.

- Table 1 lists the threats and hazards that were analyzed within the quantitative and comparative framework established by the 2011 SNRA.
- Table 2 lists threats and hazards that were identified by SNRA participants as relevant to national preparedness, but which did not have sufficient likelihood or impact data for comparative analysis with the threats and hazards of Table 1. These hazards were studied qualitatively.

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Table 1: Threats and Hazards Quantitatively Assessed in the SNRA

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Hurricane	A tropical storm or hurricane impacts the U.S. resulting in direct economic losses of greater than \$100 million
(b)(5) Space Weather***	(b)(5)
(b)(5) Wildfire	(b)(5)
Wildfire	A wildfire occurs within the U.S. resulting in direct economic losses greater than \$100 million
Technological / Accidental	
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(b)(5)	(b)(5)

Threat/Hazard Type	Threat/Hazard Description and Impact Threshold	(b)(5)
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Explosives Terrorism Attack***		
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Radiological Terrorism Attack	A hostile non-state actor(s) acquires radiological materials and disperses them through explosive or other means (e.g., a radiological dispersal device or RDD) or creates a radiation exposure device (RED)	
* New in SNRA 2015		
** New in SNRA 2015: Added 2012		
*** Revised in SNRA 2015		

Table 2: Threats and Hazards Qualitatively Identified in the SNRA

Threat/Hazard Type	Threat/Hazard Description
Natural	

(b)(5)

Threat/Hazard Type	Threat/Hazard Description
Tsunami ²¹	A tsunami with a wave of approximately 50 feet impacts the Pacific Coast of the U.S.
Volcanic Eruption ²²	A volcano in the Pacific Northwest erupts impacting the surrounding areas with lava flows and ash and areas east with smoke and ash
Technological / Accidental	
Human Caused / Adversarial	
* ** ***	New in SNRA 2015 New in SNRA 2015: Added 2012 Revised in SNRA 2015

Table 3: Cross-Cutting Threats and Hazards Identified for Study in the SNRA

(b)(5)

Threat/Hazard Type	Threat/Hazard Description
*	New in SNRA 2015
**	New in SNRA 2015: Added 2012
***	Revised in SNRA 2015

The Current National Risk Environment

Analytic Approach

The quantitative analysis of the SNRA drew data and information from a variety of sources, including existing U.S. Government models and assessments, historical records, structured analysis, and judgments of experts from different disciplines. The information was used to assess the risk of identified incidents as a function of frequency²⁴ and impacts. More specifically, asking:

- With what frequency is it estimated that an event will occur?
- What are the impacts of the event(s) if it does occur?

Frequency was estimated as the potential number of occurrences or attacks, per year, which met or exceeded the established threshold²⁵ for the event. For the majority of events (including threats with unclassified analyses in the 2015 SNRA), frequency estimates were based on statistical analysis of historic data, or directly from historical data where extensive records were available.²⁶ Chemical, Biological, Radiological, and Nuclear (CBRN) adversarial/human-caused frequencies were estimated primarily using elicitation from subject matter experts.²⁷

The SNRA examined the impacts associated with six categories of harm: loss of life, injuries and illnesses, direct economic costs, social displacement, psychological distress, and environmental impact. This multifaceted view of potential impacts draws attention to the broad and often interdependent effects of incidents that require whole community preparation and cooperation across the homeland security enterprise. For instance, fostering resilient communities relates to both mitigating human and economic impacts and addressing the psychological and social distress caused by the incident. Similarly, other types of resilience involve withstanding environmental and infrastructure degradations to ensure continued delivery of essential services.

The SNRA relied on the best available quantitative estimates of frequency and impact from existing U.S. Government assessments, peer-reviewed literature, and expert judgment. Where sufficient quantitative information was not available, events were assessed qualitatively. The estimates of the frequency and impacts for each of the events considered were compared where appropriate. No effort was made to create a single “risk judgment” for any event type, because it was deemed infeasible to aggregate all impact types into a single metric. Instead, the assessment treated impact categories separately (e.g., economic impacts are reported separately from fatality impacts). This allowed stakeholders to apply their own expert judgments to the findings and decide how those findings should inform core capabilities in the Goal.

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All sources and estimates were documented to promote credibility, defensibility, and transparency within the assessment. Uncertainty in frequency and impacts was explicitly included in the analysis by representing low and high bounds in addition to best estimates. Examples of sources of uncertainty include incomplete knowledge of adversary capabilities and intent, variability in possible event severity and location, and lack of historical precedence.

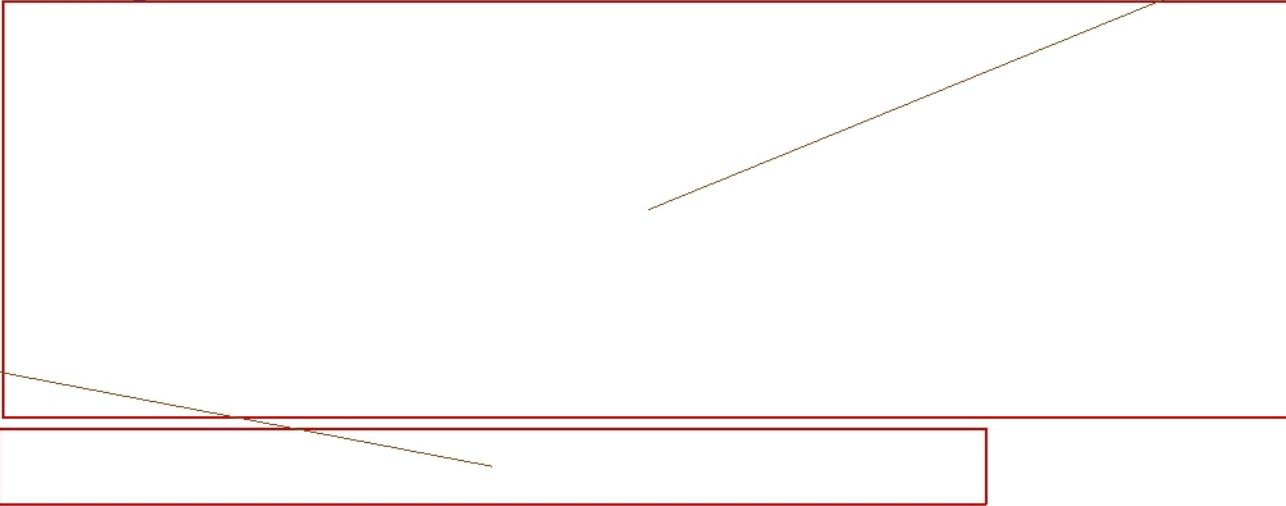
The assessment was performed at a strategic national-level and provides the ability to draw rough comparisons and identify broad differences in risk across the quantitatively assessed events—within an order of magnitude. Given the uncertainty inherent in assessing risks at a national-level and the lack of information about some of the events included—many of which are likely to occur very infrequently—the assessment was designed to avoid false precision. Instead, the assessment identifies only those differences in risk that are still significant despite the associated uncertainties.

The analysis of available information—even if that analysis is imprecise and contains a wide degree of uncertainty—supports better decision making, as long as key limitations and assumptions are noted. Participants designed the SNRA to capture the best information available regarding homeland security risks to inform the Goal and supporting preparedness efforts. There are two additional considerations for preparedness partners:

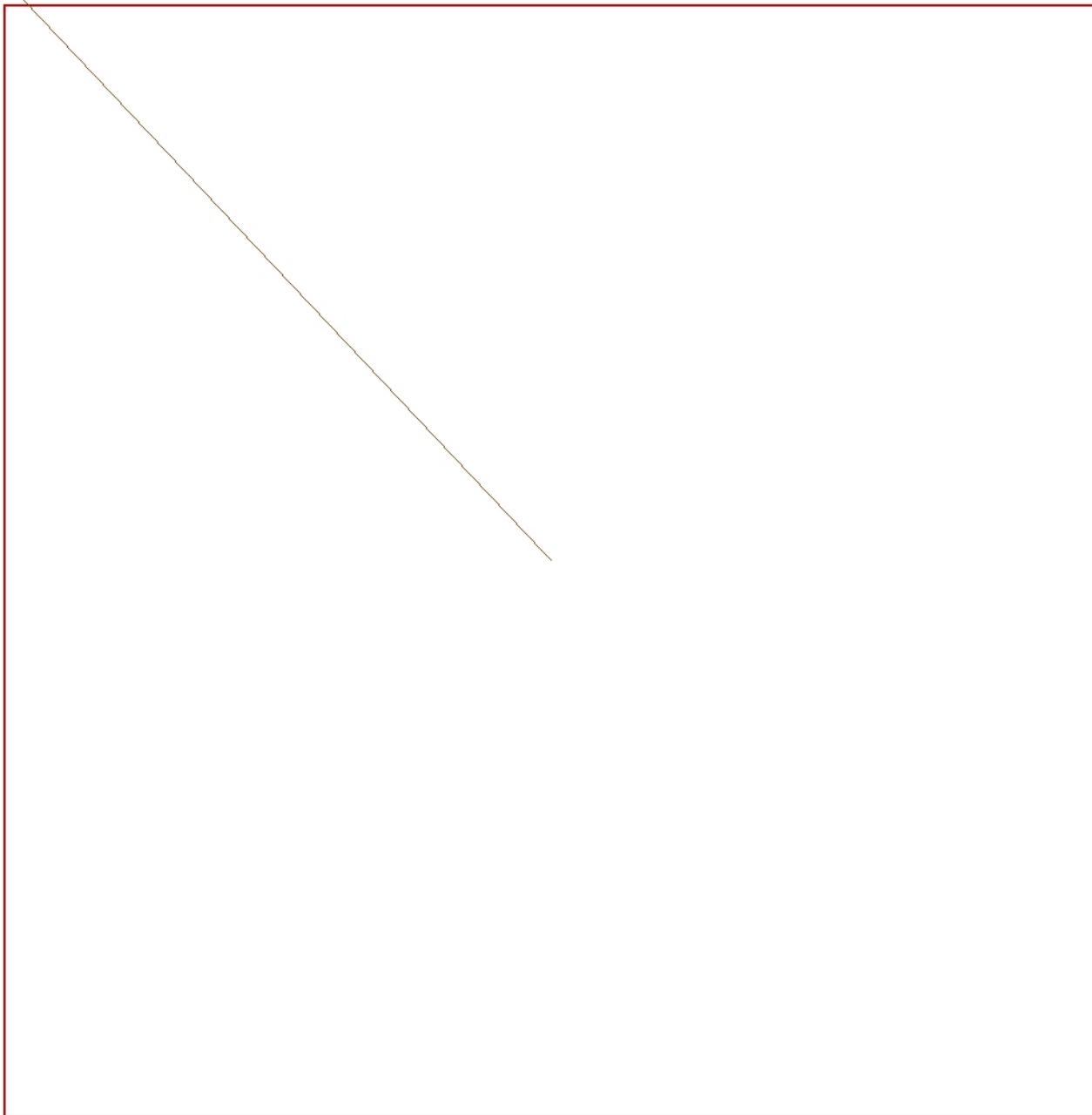
- This is a *strategic* national risk assessment. The SNRA addresses national risk based on total impacts to the Nation, not limited by geographic boundaries. As such, it does not present a full view of the risk facing communities. To complement preparedness planning, it is also necessary to consider local, regional/metropolitan, state, tribal, territorial, and insular area variations in risk.
- Given the emphasis in PPD-8 on contingency events with defined beginning and endpoints (e.g., hurricanes, terrorist attacks), the current SNRA does not explicitly assess persistent, steady-state risks like border violations, illegal immigration,²⁸ drug trafficking, and intellectual property violations, which are important challenges for DHS and the homeland security enterprise.

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Findings

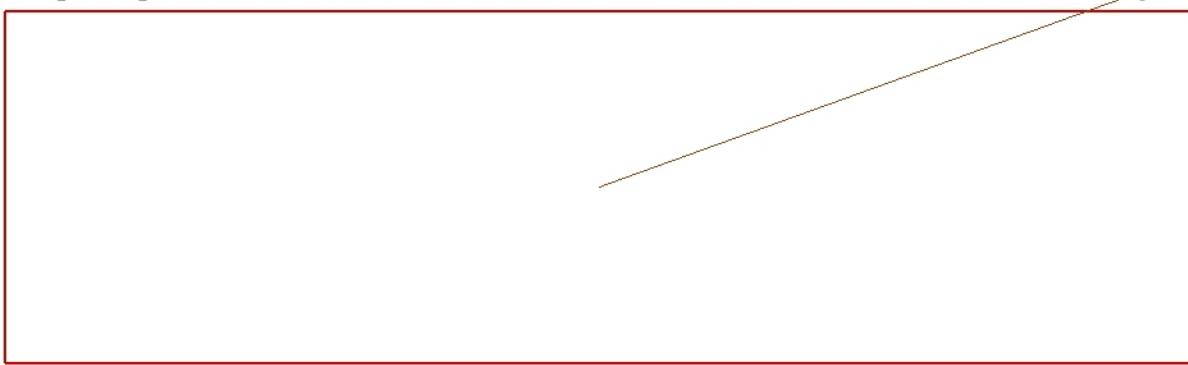


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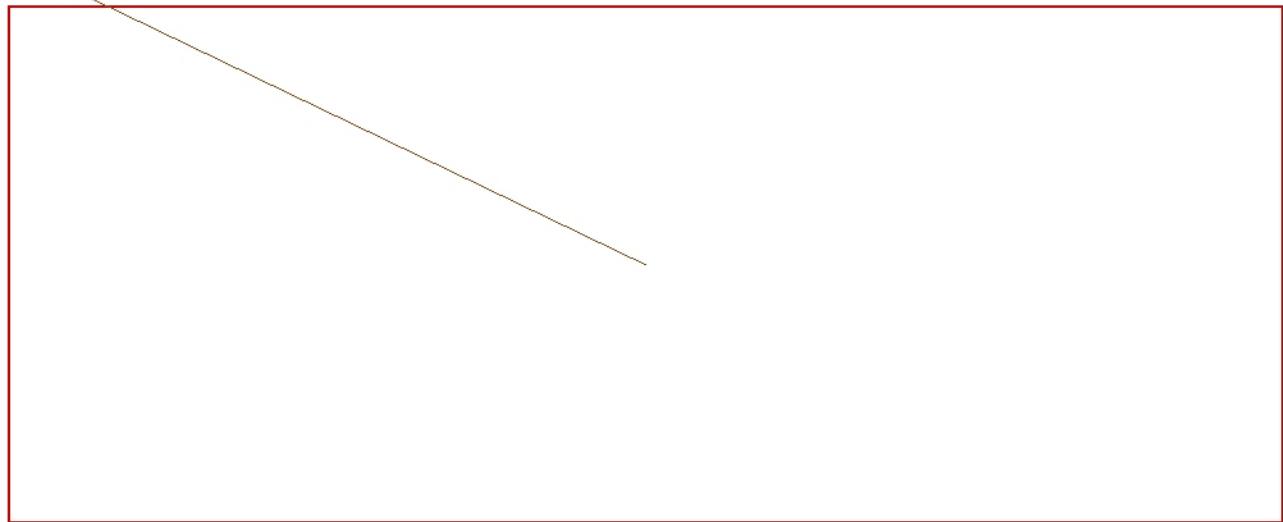
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SNRA participants identified a number of additional threats and hazards (Table 2), including:



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Drivers and Evolving Threats

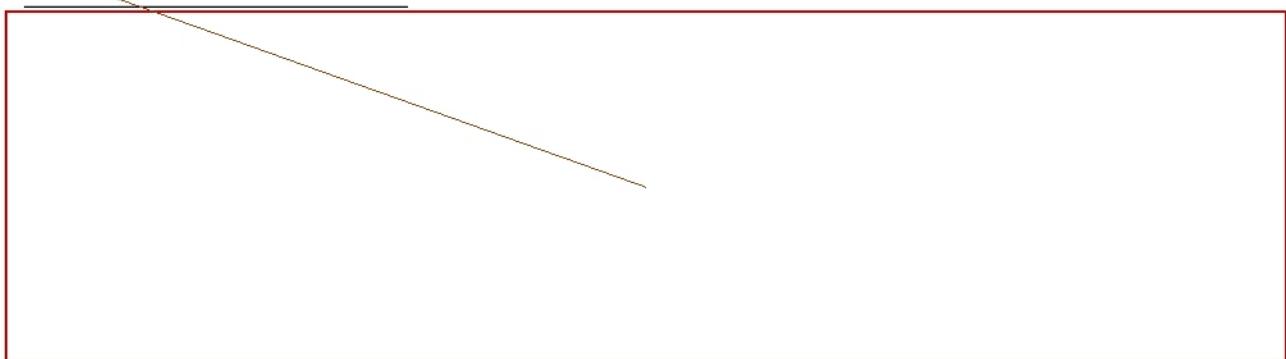
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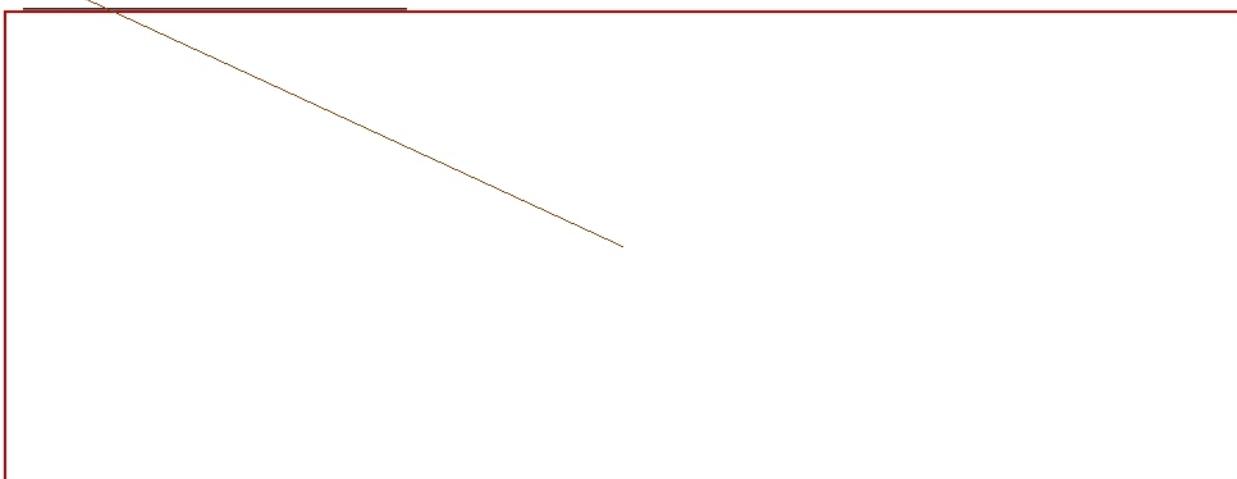
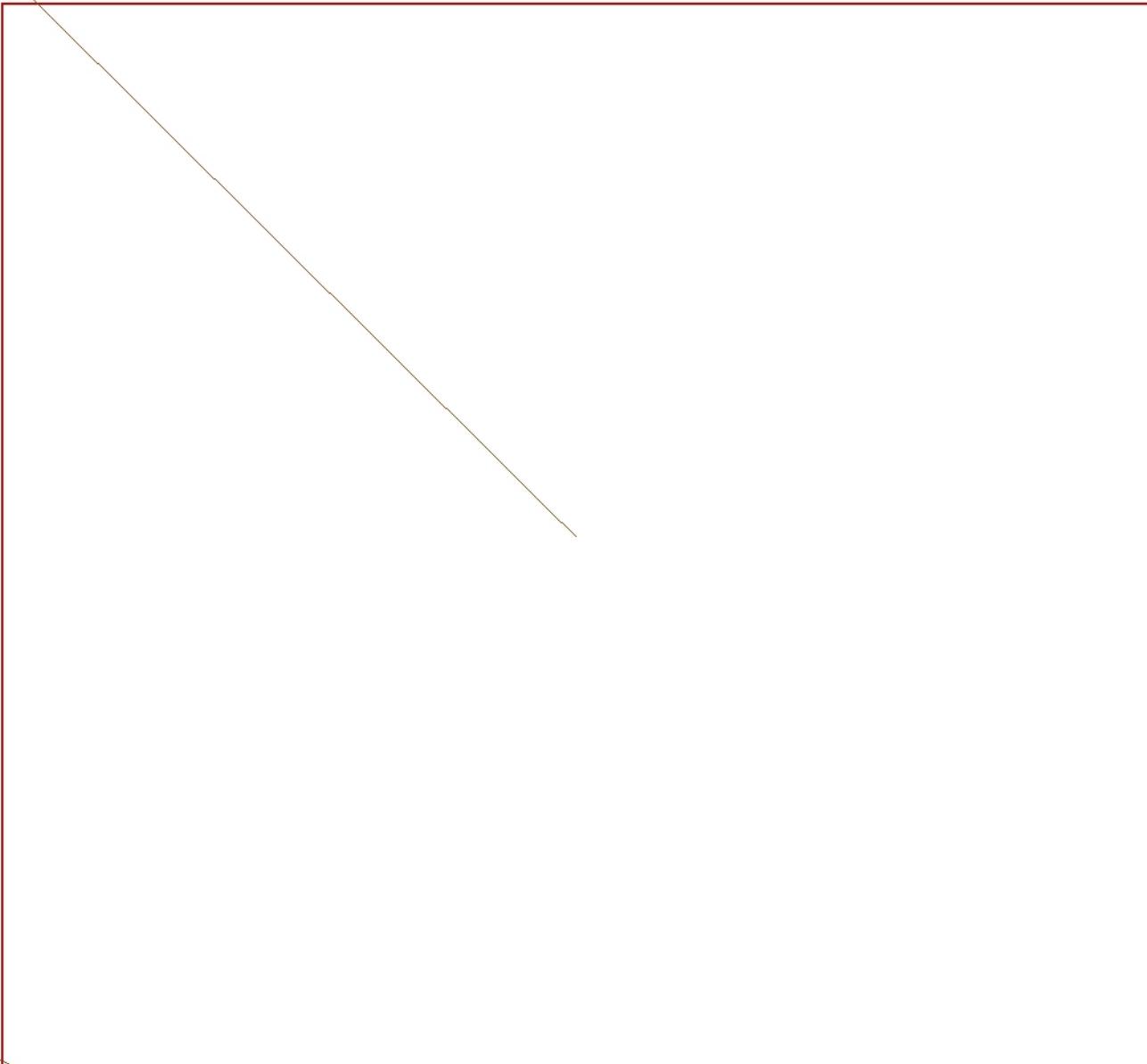
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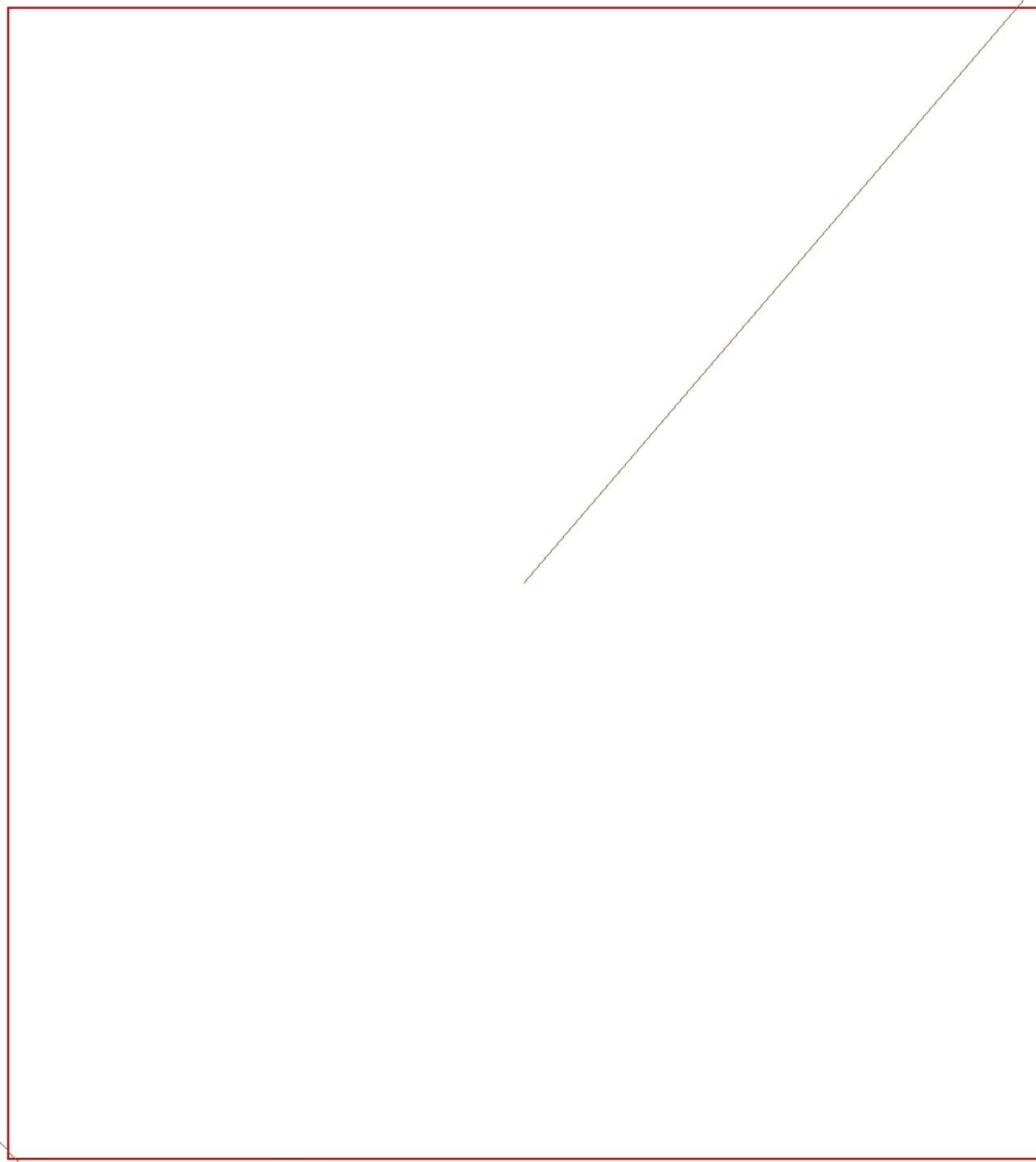


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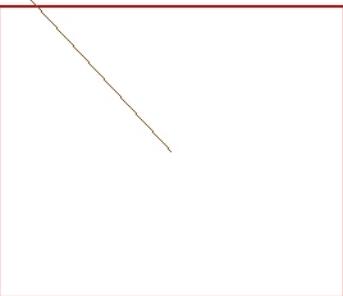


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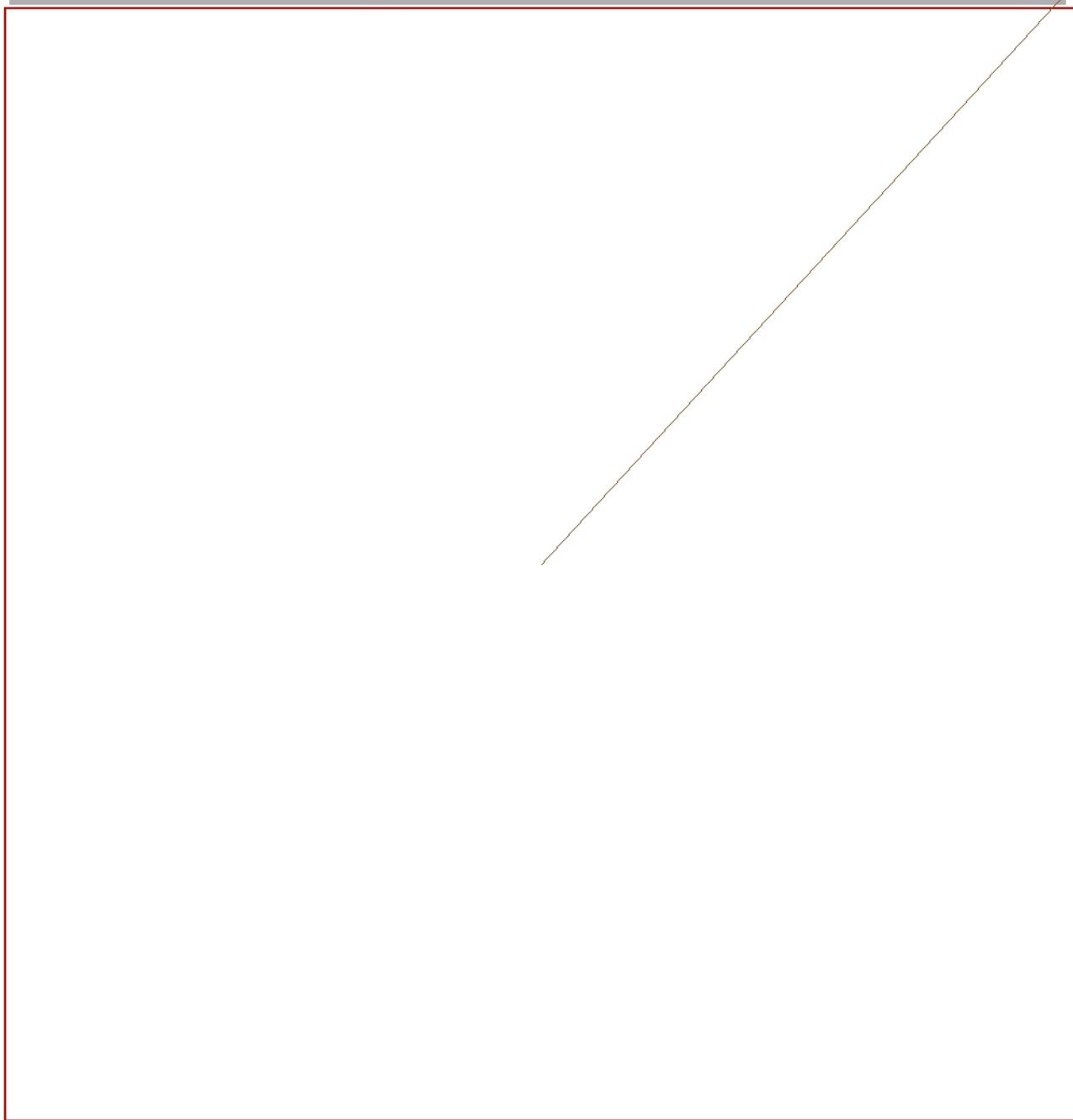


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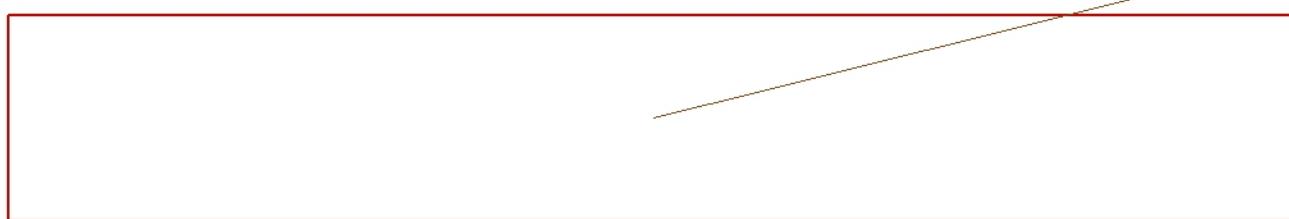


Threats and Hazards of Greatest Concern by Whole Community Partners

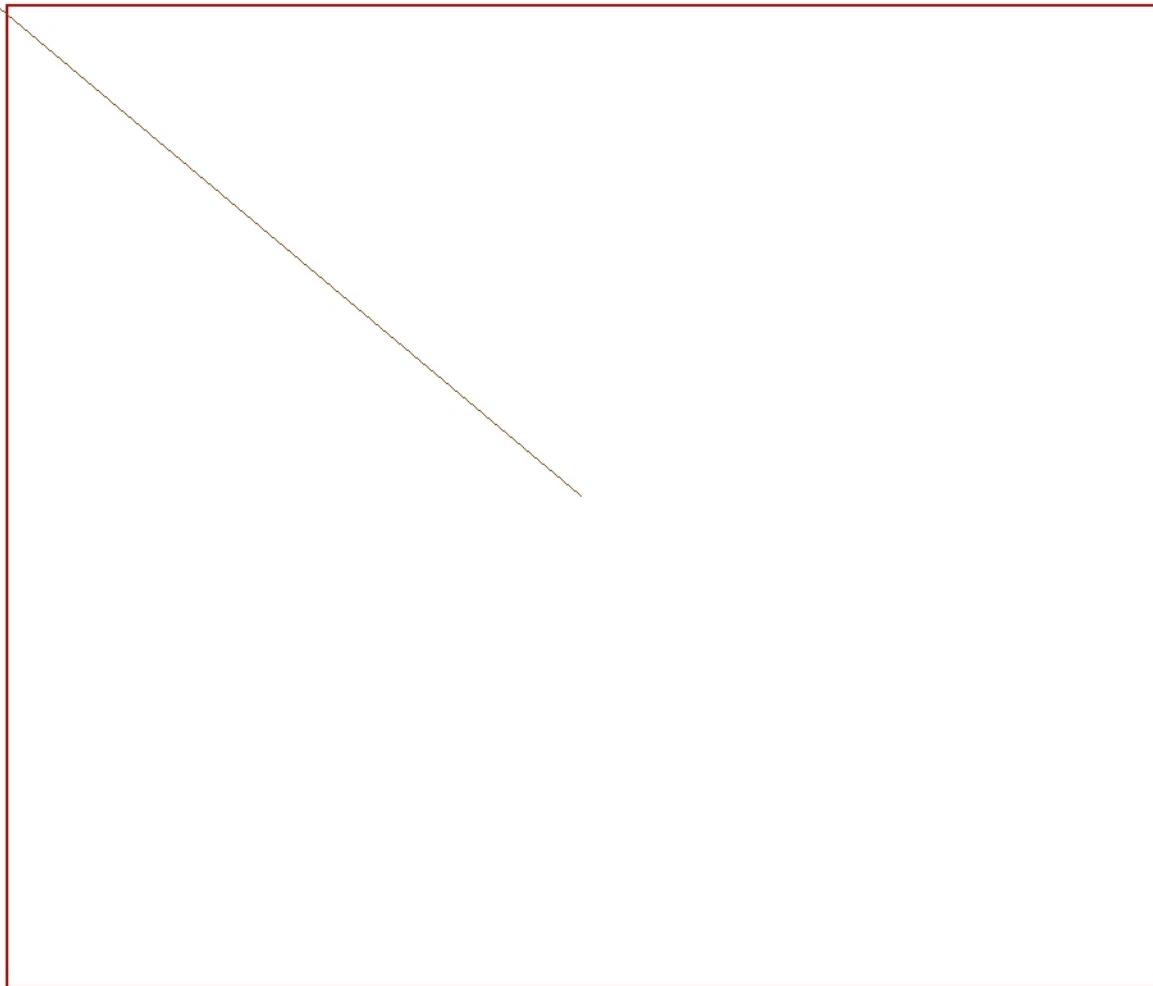
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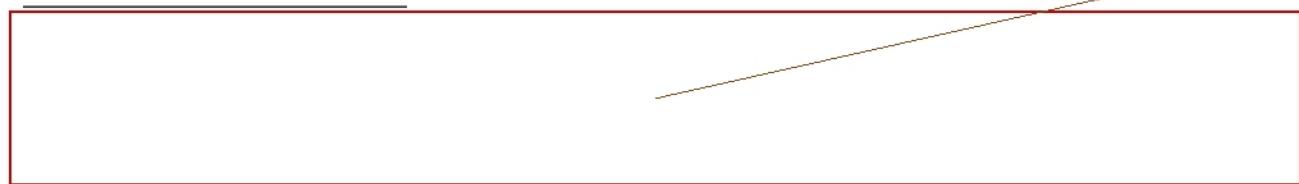
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Final Notes

The SNRA process provides a broad analysis of the risks from the varied threats and hazards faced by the Nation. This assessment finds that a wide range of threats and hazards pose a significant threat to the Nation, affirming the need for an all-threats/hazards, capability-based approach to preparedness. The SNRA is designed to inform prioritization and tradeoff decisions by enabling the analysis of which capabilities are likely to have an impact at reducing identified high-risk events. Using the SNRA, the whole community can better understand which scenarios are more likely to impact them, what the consequences would be, and what risks merit special attention.

The SNRA process will continue to be implemented in support of the National Preparedness Goal, the National Preparedness System, and the all-hazards, capability-based planning approach to national risk management. Although the development and update of the SNRA are important steps, further analysis through the implementation of regional- and community-level risk assessments will help communities better understand their risks and form a foundation for their own security and resilience. The Nation's preparedness is dependent on whole community partners understanding the risks they face across all levels of government. In conjunction with local, regional/metropolitan state, tribal, territorial, insular area, and Federal partners, the SNRA process will be further implemented and refined in order to serve as a unifying national risk profile helping to facilitate preparedness efforts across the Nation.

Strategic National-level Risk Assessment (SNRA): Terms of Reference

I. Policy Mandate

The Presidential Policy Directive - 8 (PPD-8) Implementation Plan mandates, as part of the development of the National Preparedness Goal (NPG), that “The Secretary of Homeland Security shall conduct a strategic, national-level risk assessment¹ to identify the relevant risk factors that guide where core capabilities are needed and develop a list of the capabilities and associated performance objectives for all threats and hazards that will measure progress toward their achievement.” This document describes how the PPD-8 Implementation Team intends to meet that requirement.

II. Decision Statement

The Strategic National-level Risk Assessment (SNRA) will support the identification of core capabilities necessary for National preparedness and decisions as to what level, and against what considerations, those capabilities are needed.

III. Scope

The SNRA will focus on those threats and hazards identified in PPD-8, considering the range of natural hazards (including (b)(5)), potential industrial accidents, and acts of terrorism, including (b)(5)).² It will be designed to assess the risks of those events and incidents which create consequences that rise to a strategic, national level of impact.³

The assessment will focus on estimating risk⁴ over the next three to five years, in support of the overall need to take a future-oriented look at core capability development. In doing so, the assessment may also qualitatively identify future trends, drivers, and conditions that may impact homeland security preparedness needs beyond the five year period.

IV. Timeframe

The initial SNRA will be conducted over a four-week period. The results of the initial assessment will be used to help refine core capabilities for the publication of the NPG on September 25, 2011. The SNRA will be designed to support the follow-on execution of a more detailed national-level risk assessment to be conducted as part of the National Preparedness System (NPS) in FY 2012, and will also be designed to support integration with regional, State, and local risk assessments.

V. Execution Elements

The Secretary of Homeland Security has the lead for conducting the SNRA. The Federal Emergency Management Agency and National Protection and Programs Directorate will provide leadership on the execution of the assessment on the Secretary’s behalf, in coordination with DHS Office of Intelligence & Analysis (I&A) and DHS Office of Policy and other involved parties. The Director of National Intelligence will facilitate coordination across the intelligence community and, in coordination with the Attorney General, engage the law enforcement community to provide all relevant and appropriate terrorism-related intelligence information for the development of the risk assessment. The FBI will serve as the primary interface for purpose of conducting the risk assessment on behalf of the Attorney General. Other Departments and Agencies will provide information, analysis, and expertise to support the conduct of the SNRA as required. Additional members of the homeland security community (i.e appropriate State, local, tribal, territorial officials as well as private sector and non-governmental organizations) will be engaged during the conduct of the SNRA consistent with overall PPD-8

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implementation. To support execution of this risk assessment, threat- and hazard-specific sub-groups will be established to gather risk information and provide risk judgments as part of the overall assessment, consistent with the following figure.

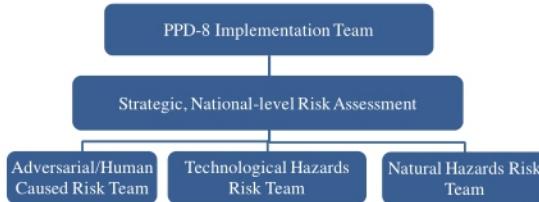


Figure 1: Structure of SNRA Execution

A key requirement for execution is to leverage existing risk assessments as well as other relevant analysis. As such, all participating parties will provide results and details on the execution of relevant assessments.⁵

VI. Proposed Approach

The SNRA will likely be based on a methodology where risk is estimated as a function of the expected frequency of an incident occurring and the consequences associated with those incidents that do occur. In the case of terrorism, frequency will be estimated as a function of the known and anticipated intent and capability of adversaries as well as existing vulnerabilities. It will follow a seven-step approach:

- **Step 1 – Agree upon Terms of Reference (ToR) and Kickoff SNRA.** This ToR will be vetted and agreed upon by the leadership of key execution elements, identified herein.
- **Step 2 – Set Consequence Thresholds and Identify Threats and Hazards of Concern.** The SNRA will evaluate the risks of incidents that have the potential to cause national-level impacts. It will be important to define a threshold of consequences that rise to national-level impacts, and execute the SNRA only for those incidents that exceed the defined thresholds.
- **Step 3 – Develop “Units of Analysis,” and Risk Assessment Methodology/Model.** The “units of analysis” for which risk will be assessed (e.g., scenarios, capabilities, etc.) will be determined based on identified threats and hazards consistent with the scope of the NPG, as well as previously conducted risk assessments. An appropriate methodology/model for evaluating risk for the identified units of analysis will be developed.
- **Step 4 – Research Existing Analysis and Assessments and Produce Risk Summary Sheets.** Existing analysis and assessments will be reviewed around all threats and hazards that are within the assessment’s scope. Based on that analysis, the SNRA team will generate scenario “summary sheets” which provide common information on what is known about the potential incidents.
- **Step 5 – Populate and Execute the Methodology/Model Using the Gathered Data and Subject Matter Expertise.** The risk summary sheets, along with input from SMEs, will be used to populate and execute the model. The SNRA team will then analyze the outputs of the methodology and produce findings to inform the NPG.
- **Step 6 – Conduct Synthesis Sessions.** Using the outputs of the risk model, “synthesis” sessions will be conducted to allow for integration of the assessed risks across different threats and hazards and additional input from PPD-8 stakeholders. The aim of the synthesis sessions will be to produce defensible, comparative SNRA findings that reflect both model outputs, and perspectives from SMEs and key national preparedness leaders.
- **Step 7 – Document Assessment results.** The results will be included as part of the NPG.

VII. End State

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The end state of the SNRA will be a comparative assessment of the risk of an identified set of high-consequence threat and hazard scenarios that supports analysis of the core capabilities necessary for National Preparedness to allow for a more robust NPG.

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