Key Elements of Homeland Security Risk Analysis

The homeland security risk analysis process outlined in this course includes the following activities:

- Identify and prioritize critical assets,
- Identify and prioritize threats and hazards,
- Assess the vulnerabilities of the assets to the threats and hazards,
- Assess the possible consequences of the threats and hazards affecting the assets, and
- Analyze risk, using the data gathered during the previous activities and appropriate analysis tools and methodologies.

Identify and Prioritize Assets
One approach to creating an asset catalog is to:

- Engage subject matter experts,
- Generate an initial asset list, and
- Prioritize this initial list of critical assets.

The outcome of this process is a catalog of critical assets for the jurisdiction. Throughout the process, data management processes should be in place to access, update, and communicate asset catalog information.

Identify and Prioritize Threats and Hazards
One approach to identifying and prioritizing threats and hazards is to:

- Engage subject matter experts
- Identify the kinds of terrorist threats and potential natural and technological hazards that could happen in the area
- Determine the probability of the identified threats and hazards actually impacting the jurisdiction

The outcome of this process is a prioritized list of threats and hazards for the jurisdiction based on estimated probability.
Assess Vulnerabilities
One approach to assessing vulnerabilities is to:

- Engage subject matter experts
- Establish metrics to measure vulnerability of assets to identified threats and hazards
- Rate each asset-threat scenario against possible vulnerabilities
- Convert the qualitative ratings to numeric values

The outcome is a set of vulnerability values for each asset-threat scenario.

Assess Consequences
One approach to assessing consequences is to:

- Engage subject matter experts
- Determine a way to measure the possible consequences of identified threats and hazards
- Rate each asset-threat scenario against possible consequences
- Convert the qualitative ratings to numeric values

The outcome is a set of consequence values for each asset-threat scenario.

Analyze Risk
Data collected about assets, threats and hazards, vulnerabilities, and consequences can be rolled up or combined to provide a risk value for every asset. These risk values can then be compared relative to one another in order to better understand the jurisdiction's risk profile. Using this information, you can consider the following issues:

- **Asset risk:** What are your highest and lowest risk assets, relatively speaking? How do they compare to the prioritization of the most important assets determined at the beginning of the process?
- **Geographic risk:** How are the highest risk assets distributed throughout the jurisdictions? Which jurisdictions have the greatest or least risk?
- **Distribution of risk:** Which areas contain most of the highest risk assets and which contain most of the lowest risk assets?
- **Range of risk:** What is the range of high, medium, and low asset risk for each jurisdiction?
- **Sector risk:** Which sectors contain the most risk for the jurisdiction? Which sub-sectors?
- **Natural hazard distribution of risk:** How does the distribution of natural hazards by sector compare to the distribution of terrorist threats by sector?
- **Greatest concentration of high-risk assets:** As far as threats and natural hazards are concerned, where is the greatest concentration of high-risk assets?

These simple views of relative risk can help you begin to understand issues, identify trends, and prioritize risk management actions.