Roundtable III Discussion: Are the same kinds of risk assessments applicable across all CBRN threats?

- What are some of the major differences between assessing biological threats and chemical threats? Radiological threats? Nuclear threats?

- What are some of the major similarities between assessing biological threats and chemical threats? Radiological threats? Nuclear threats?

- How are current risk assessment strategies limited in their capacity to manage CBRN threats?

- Can the risks from these different WMD concerns be compared? How?

Thoughts, ideas, and issues discussed during Round Table III Oct 7, 2009

Some of the main differences between biological, chemical, radiological, and nuclear threats include:

- The contagiousness of biologics
- The amount required of a biological to create a large event is small, with chemicals or radiologicals you only have what you have
- Chemicals and biologicals are not comparably assessed or regulated
- Persistence issues varies from chemical to chemical and biological to biological but typically chemicals are harder to 'clean up'
- With chemical clean up there are 'by-product' risks
- The public perception to each varies as does the political and social behavior
- There is an existing security culture around nuclear material
- There are clear pre-cursors for radiologicals and chemicals
- The dual-use issues of biologicals make it harder to verify use as it is only based on intent
- There is a level of acceptance of industrial accidents, but they also have more direct community impact
- The level of adversarial capabilities changes depending on the material
- The is a different level of understanding of each risk
- Starting material varies in availability
- Terrorist awareness of public perception/protection may focus materials
- Counter measures and time for response varies
- There is a greater need for a more sophisticated risk assessment model for biological threats

- The group identified some similarities:
    - There are thousands of chemicals and emerging chemicals, like biological agents
    - CRN can (often) be detected
    - Chemicals and biologicals can be used for incapacitation
    - There is a time factor for all the threats
    - They all may cause public panic – 'worried well' and also have indirect consequences

- In general, should we be talking about "WMD" or "CBRN" or something else?
- There is a need for a common language when talking about threats
- These are multi-dimensional problems requiring multi-disciplinary expertise
- Allowing experts to score ranges of data rather than a fixed point will allow for better quality of data
- We need to better handle uncertainty factors
- There should be a common understanding on how risk is quantified across all threats
- There should be more thought or weight to consequences and recovery than is currently addressed
- Remember 'Garbage in – Gospel out'