C·A·P

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International security and WMD terrorism

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Terrorism and Security

- Change in security paradigm after 1990: from states-based threats to security risks ('snakes')

- Debate about 'new terrorism' came up in 1990s, putting in question a number of established assumptions; 9-11 fundamentally changed public perception of terrorism

- Terrorism turned from one of many security problems into the central security challenge; massive increase of actors participating in discourse about terrorism (politics, bureaucracy, media & entertainment, research)

- Risk calculation: risk-modelling based worst-case scenario; WMD-terrorism tops counterterrorism agenda in the US while only considered of minor importance in Europe

WMD terrorism

- What do we mean by WMD? Chemical, biological, radiological and nuclear weapons (CBRN); but how do we define mass-destruction?

- Chemical weapons: mainly in liquid form or aerosol spray; sarin, mustard, VX etc; delivered via pressurised containers or volatile liquid – existing skills for decontamination

- Biological weapons: Bacteria, viruses, fungi from living organism; deployment via aerosol or particulates; easy to obtain or produced, but effective delivery might be difficult; decontamination techniques exist (hydrogen peroxide/ chlorine dioxide etc)

- Nuclear/ radiological weapons ("Dirty Bomb"): nuclear weapons or improvised nuclear device & nuclear chain reaction – "mass destruction" / radioactive material dispersed using conventional explosive – "mass disruption"

Risk assessment

$R = P * C$
Risk = Probability * Consequences

Risk Calculation

$R = P(1) * P(2) * C/E$
R = Risk
P (1) = terrorist group's motivation
P (2) = terrorist group's capability
C = consequences of attack
E = effectiveness of counter-measures/ crisis management

(Steinhäusler 2009)

Groups most capable of acquiring nuclear weapons are least like to do so and vice versa (Jenkins 1975)

A group of three-four people, not previously engaged in designing nuclear weapons, but need to have technical skills (Mark et al. 1987)

Chain of events – Nuclear terrorism

1) Terrorist group (TG) with extreme objective and necessary resources/capabilities must organize itself
2) TG must choose to engage in act of nuclear terrorism (with all consequences)
3) TG must seize intact nuclear weapon or acquire fissile material to build Improvised nuclear device (IND)
4) TG must be able to bypass any safeguard-systems (intact nuclear weapon) or assemble IND
5) TG must transport nuclear weapon/ IND to high-value target
6) TG must detonate nuclear weapon /IND

(Ferguson/ Potter 2005)

Risk management

- General principle for countering WMD-terrorism: Focus on prevention in case of high-consequence low-probability risks & on consequence and crisis management for high-probability events

- In the case of nuclear terrorism: measures on safeguarding critical nuclear materials (fissile material), Cooperative Threat Reduction, IAEA (nuclear safety, database etc.), etc.

- C & B terrorism: detection, identification, decontamination, immunization

WMD-terrorism is rather a metaphor for the dangerousness of terrorism than a prediction of future terrorist activities