

Headquarters U. S. Air Force

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Beyond the Rubber Bullet:

***Non-Lethal Military Force at the
Strategic and Operational Level***



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**Major General John Barry
Director, Plans and Programs
Headquarters Air Force Materiel Command**

26 March 2002



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Air Force Transformation

Achieving asymmetric advantage through changes in operational concepts, organizational structure, and/or technological capabilities that significantly improve our warfighting capabilities or ability to meet the demands of a changing security environment.



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Non-Lethal Military Force

What's in a Name?

Disabling Weapons

?

Low Collateral Damage

?

Non-Lethal Warfare

Non-Lethality

?

Minimum Force Operations

?

Incapacitating

?

Non-Lethal

?

Sub-Lethal

?

Soft Kill

Mission Kill

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Non-Lethal Military Force Elements

Non-Lethal Military Force is ...far more than just Non-Lethal Weapons

- **Information Operations**
 - *Covert Systems Intrusion ("Hacking") infects C4I infrastructure*
- **Electronic Operations**
 - *Barrage and directed jamming suppress sensors/communications*
- **Deception Operations**
 - *"Spooing" deceives leaders and field commanders with false Intel/communications traffic*
- **Psychological Operations**
 - *TV/radio broadcasts foment popular dissent, demoralize enemy troops*
- **Other Operations**
 - *Specialized air-deployed non-Lethal area munitions produce systemic but temporary failure in electrical grids*

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Non-Lethal Military Force Evolution

<u>Evolution</u>	<u>Personnel</u>	<u>Materiel</u>	<u>Information</u>
-Minimal use of NLMF	Obscurants Deception		
Pre 20th Century			
-NLMF Used with Lethal Forces as Force Multiplier	Obscurants PsyOps Deception Chemical		Electronic Warfare
20th Century			
-NLMF w/Lethal Force	Obscurants	EMP	Electronic Warfare
-NLMF Possible Exclusive use in Certain Scenarios	PsyOps Deception Chemical Infrasound Foam Pulsing Lights Lasers High Power Microwave Entanglements	Viscosifiers Microbics Embrittlements Supercaustics Conductive Particles Super Lubricants High Power Microwave Lasers	Computer Viruses Morphing
21st Century		Entanglements	

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Range of Military Operations

(JP 1)

RANGE OF MILITARY OPERATIONS			
Military Operations	General U.S. Goal	Examples	
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">COMBAT</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">NONCOMBAT</div> </div>	War	Large-Scale Combat Operations	
	Operations Other Than War (OOTW)	Deter War & Resolve Conflict	Peace Enforcement Strikes/Raids Counter-insurgency/terrorism Peacekeeping Show of Force Counter-proliferation Humanitarian Assistance Noncombatant Evac Ops
		Promote Peace	Anti-terrorism Peace Building Civil Support Counter Drug Nation Assistance Disaster Relief Noncombatant Evac Ops

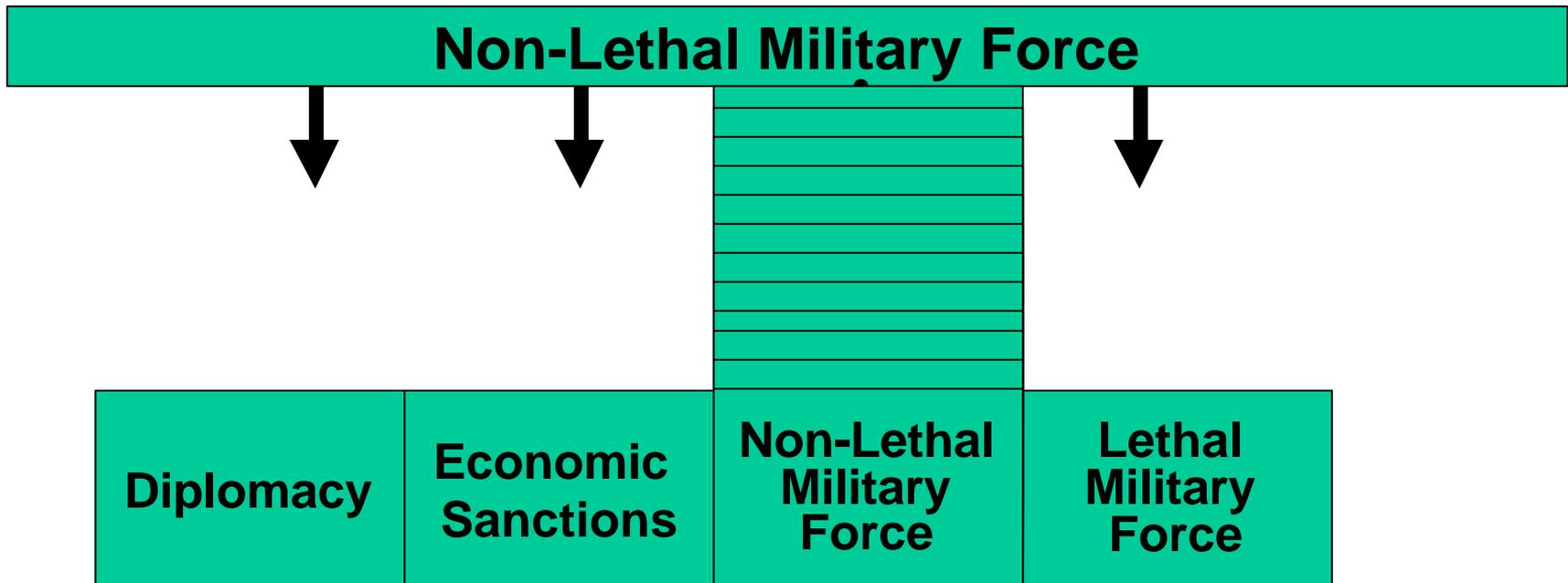
Lethal Military Force

Nonlethal Military Force



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Filling the Void in the Coercive Options Spectrum



Not Necessarily Sequential -- may be simultaneous

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Non-Lethal Military Force ...all levels and full Spectrum

Non-Lethal Military Force can be used at all levels of conflict
...also in conjunction with lethal force



•Strategic



•Operational



•Tactical

And across the full range of Military Operations ...

RANGE OF MILITARY OPERATIONS		
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COMBAT	War	Large-Scale Combat Operations
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Lethal Military Force

Nonlethal Military Force

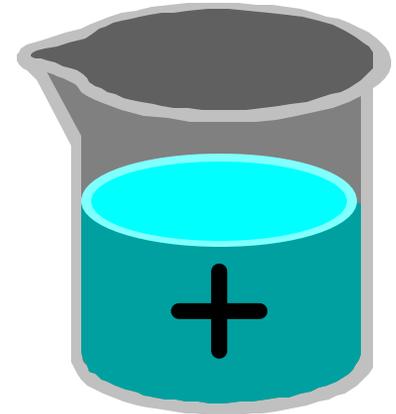


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Non-Lethal Military Force

The Glass Half-Full

- **Defusing** the Glass Half-Empty
- **Moral** Defensibility
- Reaping **Political Benefits** from Vital, Major and Peripheral Interests
- **Military Effectiveness**
- Flexible, Economical, and Affordable Tools of **Persuasion/Coercion**



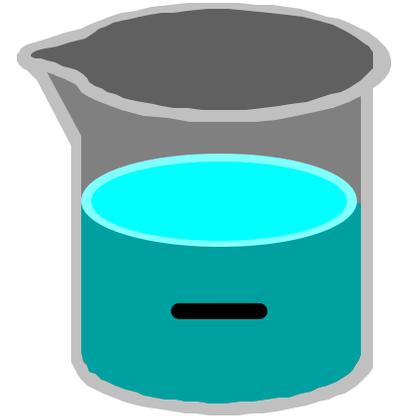


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Non-Lethal Military Force

The Glass Half-Empty

- Non-Lethal Military Force Could be **Fatal**
- The Dangers of Great **Expectations Unfulfilled**
- Resource **Trade-offs** Required
- Foreign Policy Pitfalls
 - Invitation to **Adventurism**
 - A Non-Lethal **Deterrent?**
 - The Threat of **Escalation**
 - **Proliferation** Dangers
- Potential **Legal Controversies**
- The Moral **Low Ground?**





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Non-Lethal Military Force Doctrinal Precepts

- NLMF can **provide additional leverage** toward political & military objectives.
- NLMF can be **used in conjunction with diplomatic pressure, economic sanctions & lethal military force**, resulting in minimum casualties & collateral/environmental damage to both sides.
- NLMF can be used effectively against nation-states &/or non-governmental nationalistic or transnational threats.
- There are three tenets of NLMF - **Synergism, Versatility, & Discretion.**

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Non-Lethal Military Force Doctrinal Precepts

- NLMF should **target the adversary's center of gravity.**
- NLMF can be used in conjunction with approved combined/coalition operations.
- NLMF can be used in the early stages of a conflict to limit risk of lethal escalation and minimize threats to U.S. interests.
- NLMF can be employed **overtly or covertly**

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Non-Lethal Military Force Policy Precepts

■ **Resource Mobilization -- Selection Criteria**

- In consonance with **American moral & ethical values**
- **Priority to anti-materiel** Non-Lethal technologies
- Are **operationally feasible**
- Requires sophisticated **countermeasures** to be developed by emerging competitors
- Are **risk-acceptable** when evaluated against other options
- Are within the bounds of international **legal** accords & treaties
- Produce military **value** that is measurable
- Justify **additional cost** in required intelligence, commensurate with the targeting investment/effect

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Non-Lethal Military Force Policy Precepts

■ **Adaptability -- Employment Policies**

- Joint Force Commanders should **use anti-materiel and anti-information** Non-Lethal technologies to the maximum extent **before considering anti-personnel technologies.**
- Non-Lethal weapons should be **designed to be employed from current and future operational delivery platforms.**
- NLMF is **not meant as a substitute for lethal means** when lethal means are required

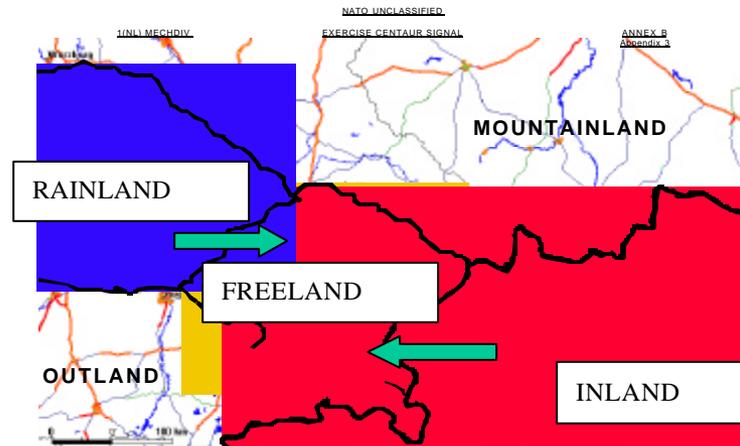
■ **Allocation**

- DoD should **explore countermeasures**, to include those not developed for operational use.

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Non-Lethal Military Force Operational & Strategic Focus



Strategic Scenario -

“Rainland” and “Inland” invade and occupy friendly “Freeland”

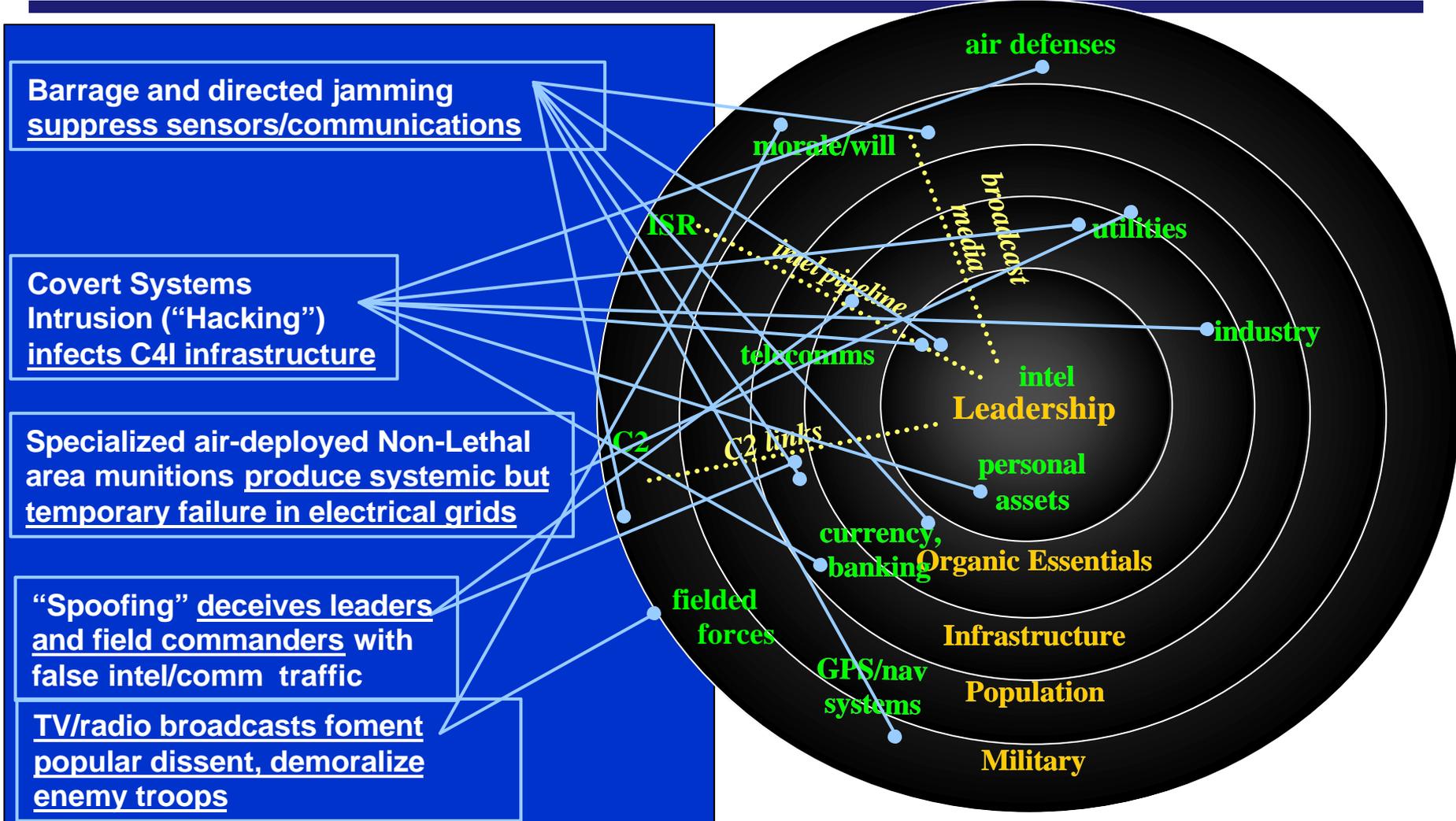
Rules of Engagement:

- Lethal force permitted inside Rainland and Inland’s borders
- Lethal force to be limited in occupied Freeland in order to ...
 - **Protect friendly citizens and infrastructure**
 - **Ease reconstruction after liberation**



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Non-Lethal Actions Information Warfare Phase



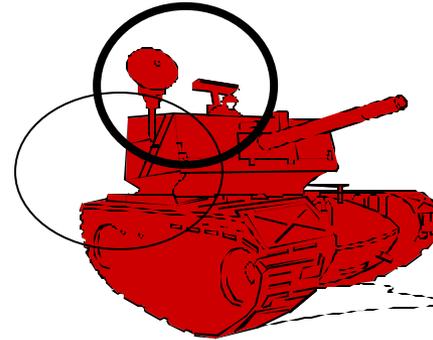
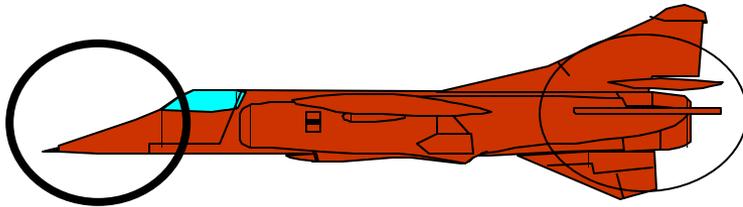
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Non-Lethal Actions Counter-Materiel Phase

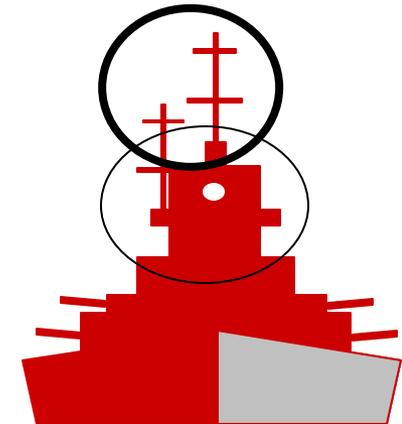
Strategic Goal: *Facilitate stability and minimize animosity towards the US*

Operational Goal: *Minimize collateral damage and use NLMF when applicable while conducting operations*



Options?

- Disable/disrupt sophisticated military electronics on the vehicles, aircraft, and vessels

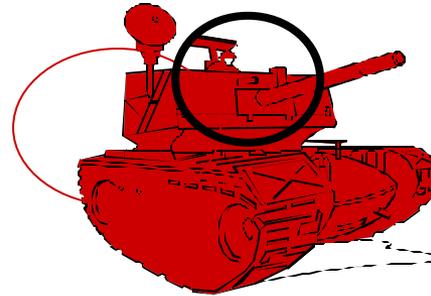
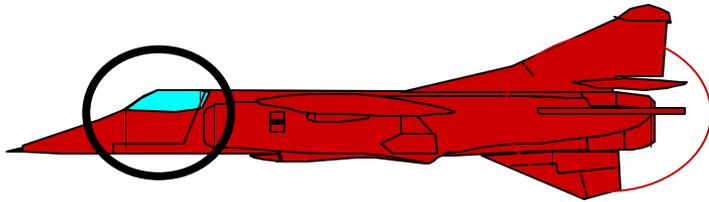




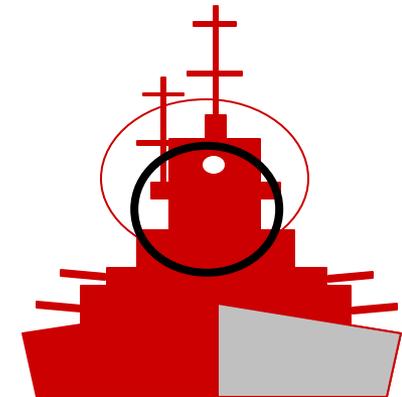
Non-Lethal Actions Counter-Materiel Phase (cont.)

Strategic Goal: *Facilitate stability and minimize animosity towards the US*

Operational Goal: *Minimize collateral damage and use NLMF when applicable while conducting operations*



Obscure the vision
ports/windows/optics of vehicles

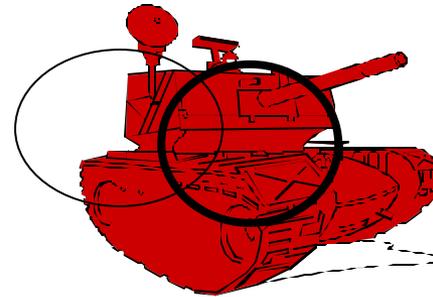
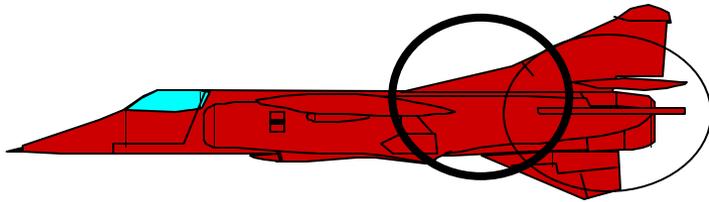




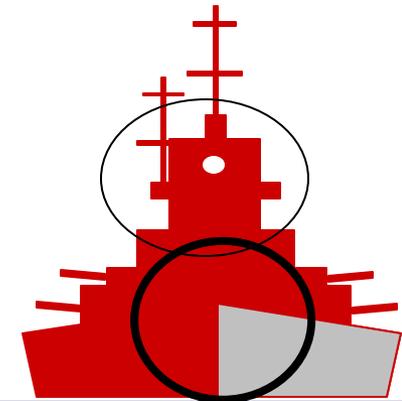
Non-Lethal Actions Counter-Materiel Phase (cont.)

Strategic Goal: *Facilitate stability and minimize animosity towards the US*

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Cause fuel in
vehicle/vessel/aircraft to
gel/solidify and thus make
unusable





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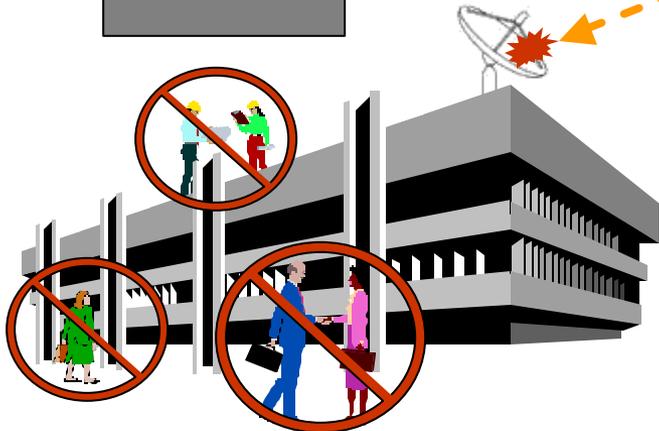
Non-Lethal Actions Counter-Materiel Phase (cont.)

Advanced Tactical Laser

- Pinpoint Accuracy
- Low Collateral Damage



Avoid
non-combatants



- Extremely accurate
- Avoids Non-combatants



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Non-Lethal Actions Counter-Personnel

Strategic Goal: *Facilitate stability and minimize animosity towards west*

Operational Goal: *Clear non-combatants away from targets to prevent unintended casualties*

- Military Targets
- Dual Use Targets



How? -*Airborne Non-Lethal Directed Energy/
Active Denial Technology*

Active Denial technology is a breakthrough non-lethal technology that uses millimeter-wave electromagnetic energy to stop, deter and turn back an advancing adversary from relatively long range. It is expected to save countless lives by providing a way to stop individuals without causing injury, before a deadly confrontation develops.

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Non-Lethal Military Force and Military Transformation

- **Non-Lethal Systems and Concepts are Emerging**
 - Non-Lethals are a **new set of tools** for our toolbox
 - They add **new capabilities** to our forces
 - They represent an important component of **military transformation**

- **DoD Actions**
 - Continue to develop NLMF **CONOPS**
 - Continue to develop NLMF **Systems**

- **In today's world, our leaders need every option they can get**
 - **Low Collateral Damage/low risk to non-combatants are needed capabilities for future operations**

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Non-Lethal Military Force and Military Transformation



Final Point ...

*We need to elevate planning on Non-Lethal
Military Force to include the operational and
strategic levels of warfare*



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Non-Lethal Military Force

Questions?

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