ABOUT THESE CARDS

These cards are designed to aid visual identification of a selection of Physical Security and Stockpile Management, as well as destruction issues.

Technical advice and photographic material were kindly contributed by the following agencies:

DEFENSE THREAT REDUCTION AGENCY
UNITED STATES OF AMERICA

NATO
OTAN
NAMSA

OSCE

The Small Arms Survey

The Small Arms Survey serves as the principal international source of public information on all aspects of small arms and armed violence, and as a resource center for governments, policy makers, researchers, and activists.

The Survey distributes its findings through a series of publications including occasional papers, special reports, issue briefs, as well as its annual publication *Small Arms Survey*.

The project has an international staff with expertise in security studies, political science, international public policy, law, economics, development studies, conflict resolution, sociology and criminology. The staff works closely with a worldwide network of researchers and partners.

For more information visit our website: www.smallarmssurvey.org

SAS is a project of the Graduate Institute of International and Development Studies, Geneva

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MASS EXPLOSION

- UN Hazard Classification
- Ensure items properly marked
- Damage from mass-detonating hazard materials is caused by concussion or blast or by sympathetic detonation

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FRAGMENTATION

- UN Hazard Classification
- Ensure items properly marked
- Principle hazards are fragment and blast, either individually or in combination, depending on storage configuration, type of packing, and quantity

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MASS FIRE

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- UN Hazard Classification
- Ensure items properly marked
- Items burn vigorously
- Little or no possibility for extinguishing them in a storage situation

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MODERATE FIRE

- UN Hazard Classification
- Ensure items properly marked
- Fire hazard with no blast hazard and virtually no fragmentation or toxic hazard beyond the fire hazard clearance specified for high-risk materials

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FIRE DIVISION 1
MASS DETONATION

- UN Hazard Classification Storage Facility Markings
- Ensure items properly marked
- Damage from mass-detonating hazard materials is caused by concussion or blast or by sympathetic detonation

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FIRE DIVISION 2 FRAGMENTATION

- UN Hazard Classification Storage Facility Markings
- Ensure items properly marked
- Principle hazards are fragment and blast, either individually or in combination, depending on storage configuration, type of packing, and quantity

FIRE DIVISION 3
MASS FIRE

- UN Hazard Classification Storage Facility Markings
- Ensure items properly marked
- Items burn vigorously
- Little or no possibility for extinguishing them in a storage situation

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FIRE DIVISION 4
MODERATE FIRE

- UN Hazard Classification Storage Facility Markings
- Ensure items properly marked
- Fire hazard with no blast hazard and virtually no fragmentation or toxic hazard beyond the fire hazard clearance specified for high-risk materials

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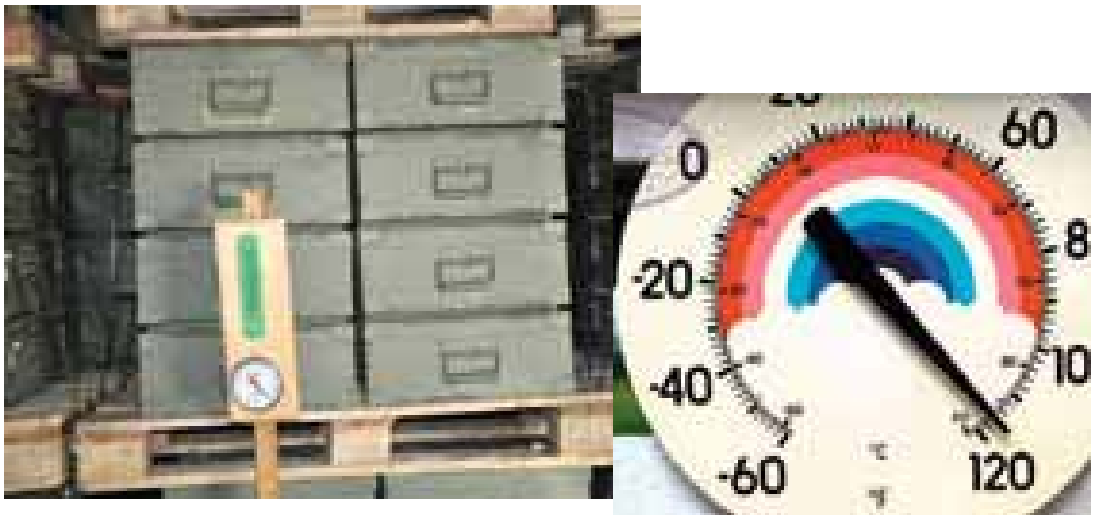
TEMPERATURES



- Avoid extreme high or low temperatures
- Avoid wide temperature variations
- Avoid high or low humidity
- Avoid vibration
- Avoid shock

STANDARD OPERATING PROCEDURES

Should contain:

- Emergency response
- Security procedures
- Accountability
- Inventories
- Training requirements
- Storage information
- Safety
- Surveillance
- Risk assessment

TRANSPORT CONSIDERATIONS

- Technically safe to transport
- Inspect equipment and personnel
- Check documents
- Vehicle marking
- Original packaging, if possible
- Vehicles should be 50 m apart
- Provide security en route
- Coordinate with law enforcement if needed

Note:
14 % of all ammunition accidents occur during movement or handling

EXPLOSION CAUSES



- Deterioration
- Carelessness
- Improper storage conditions
- Poor training
- Enemy action, terrorism, or sabotage
- Movement and handling
- Fire
- Lightning

The Defense Threat Reduction Agency (DTRA):

DTRA is the U.S. Department of Defense's official Combat Support Agency for countering weapons of mass destruction.

The Agency addresses the entire spectrum of chemical, biological, radiological, nuclear and high yield explosive threats. DTRA's programs include basic science research and development, operational support to U.S. warfighters on the front line, and an in-house WMD think tank that aims to anticipate and mitigate future threats. DTRA works with the military services, other elements of the United States government, and countries across the planet on counterproliferation, non-proliferation and WMD reduction issues with one goal in mind: Making the World Safer.

For more information visit our website: www.dtra.mil

CARTA MUNDI
MADE IN BELGIUM

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CUSTODY AND RECEIPT

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EQUIPMENT RECEIPT (DA PAM 710-2-1)	
1. UNIT Defense Threat Reduction Agency	2. RECEIPT NO. 0012345
3. STOCK NO. 1365-00-0876-2212	4. SERIAL NO. 0012345
5. ITEM DESCRIPTION Pistol, 9mm, Beretta, M9	
6. I hereby acknowledge receipt of this equipment from the unit arms room (Building 2345, room 123) of this unit.	
7. NAME SMITH, John P.	8. SOCIAL SECURITY NO. 000-00-0000
9. SIGNATURE Johnny P. Smith	10. GRADE PFC

DA FORM 3749, JAN 82 Edition of Aug 71 is obsolete.

- Requires daily sight counts
- Facilitates serial number inventories
- Use of receipt cards for each weapon
- Proper record keeping promotes good inventory management

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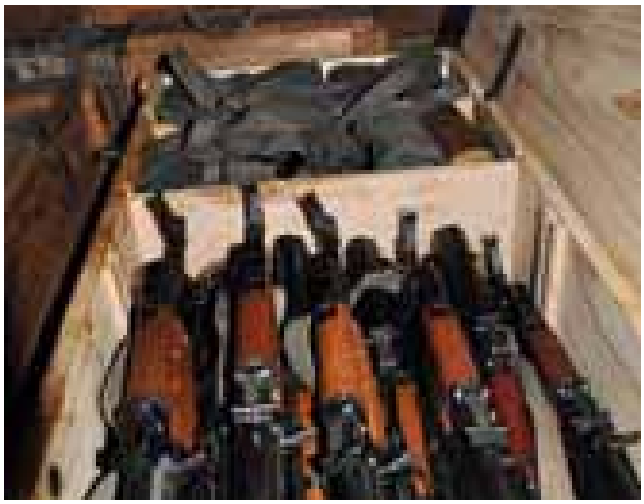
INVENTORY



- Serial Number Inventory
- Conduct monthly inventory
- Use an independent party
- Recorded, filed, and audited by higher command

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SECURITY SYSTEMS

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- Change codes regularly
- Conduct periodic testing
- Ensure back-up power in case of electrical failure

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MAINTENANCE

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- Establish and enforce a maintenance program
- Clean debris
- Cut vegetation (15 m)
- Prevent vermin from entering

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RISK MANAGEMENT

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When evaluating materiel for storage or destruction, use United Nations and NATO models to assess risk based on the following four factors:

- Degree of utility
- Potential casualty or damage effect
- Adaptability
- Portability and potential for theft

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UN CATEGORY 1

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- ONLY man portable “ready-to-fire” missiles and rockets
- Replacement rockets and missiles for the above

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UN
CATEGORY 2



- Light automatic weapons, to include medium machine guns
- Hand or rifle grenades
- Mines

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UN CATEGORY 3

- Grip stocks for MANPADS
- Guidance or trackers for missiles
- Mortar tubes
- Rocket and missile launchers > 50 kg
- Flame throwers
- Explosive-filled projectiles
- Incendiary grenades

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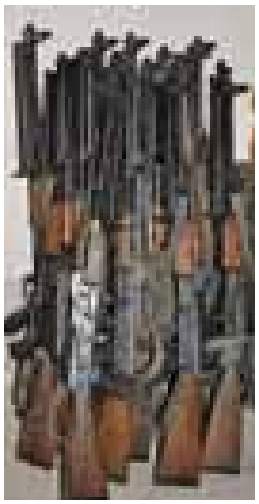
UN
CATEGORY 4



- Semi-automatic rifles
- Handguns
- Recoilless rifles
- Ammunition
- Fuzes
- Illumination grenades
- Riot-control agents

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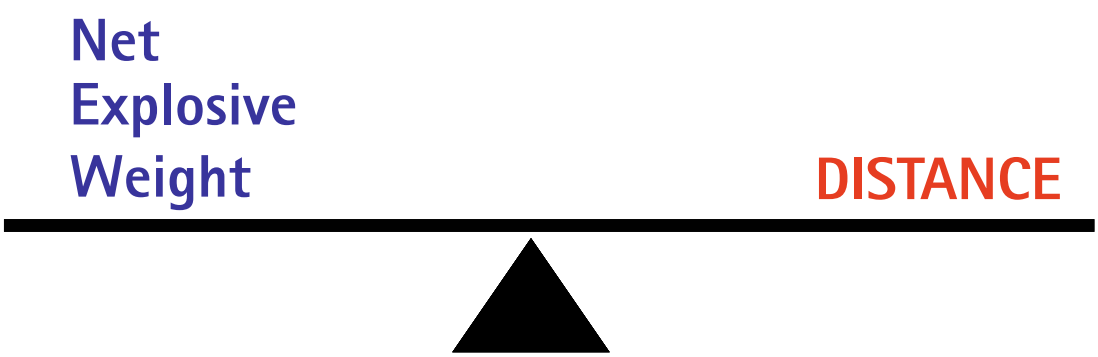
QUANTITY-DISTANCE PRINCIPLES



Determine size and location of stockpiles based on three factors:

- Amount of explosive
- Separation distance
- Type of explosive

AMMUNITION SURVEILLANCE

- Inspect visually
- Consider disassembly requirements
- Conduct chemical analysis
- Perform functional testing of components
- Live-fire a representative sample by lot number

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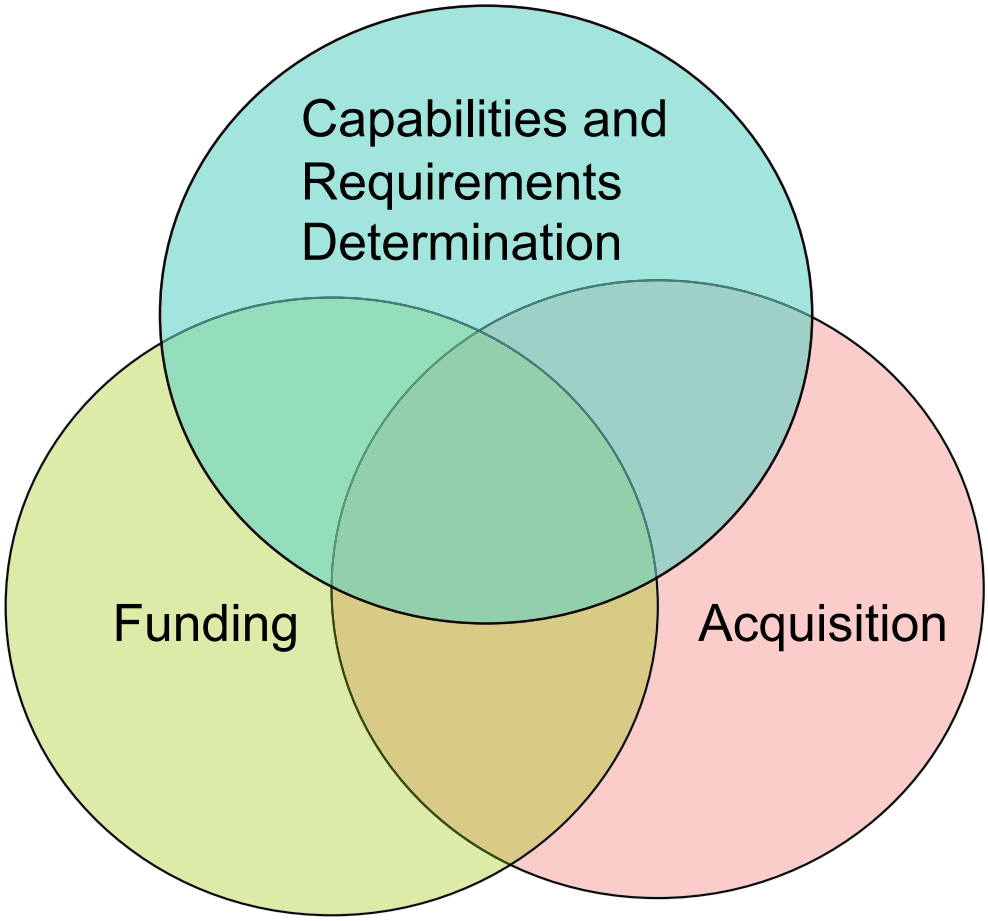
STOCKPILE MANAGEMENT



Assess current capabilities,
projected goals,
and where to improve first

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The Regional Approach to Stockpile Reduction (RASR) Initiative

The Regional Approach to Stockpile Reduction (RASR) Initiative is a long-term, coordinated, regional approach to address the threats posed by excess, unstable, loosely secured or otherwise at-risk stockpiles of conventional weapons and munitions.

RASR encourages affected governments and relevant organizations to develop a pro-active, coordinated, regional approach to secure and destroy small arms, by building local capacity, sharing best practices and lessons learned, and synchronizing resources in order to maximize their efficiency.

The ultimate aim of the RASR Initiative is to prevent disastrous explosions or destabilizing diversions of conventional weapons and munitions.

For more information visit our website: www.rasrinitiative.org

TEMPORARY DISABLEMENT

Remove and secure:

- Bolts
- Breech blocks
- Grip stocks
- Trackers
- Guidance units
- Firing mechanism
- Critical components

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MECHANICAL DISMANTLING

- Stockpile disposal
- Verify destruction of EVERY weapon
- Requires special equipment
- Maintain records of parts
- Recycle or safely dispose of residue

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OPEN AND CLOSED BURNING

- Stockpile disposal
- Requires specialized equipment; can be field fabricated
- Address environmental concerns
- Best for small arms ammunition
- Recycle or safely dispose of residue

TORCH CUTTING

- Stockpile disposal
- Typically requires minimum of two cuts per weapon
- Removes metal in the process
- Cut all similar weapons in the same pattern
- Remaining parts should be unusable as spare parts
- Recycle or safely dispose of residue

OPEN BURNING

- Stockpile disposal
- Relatively inexpensive
- Requires high-intensity heat over prolonged period
- Address environmental concerns
- Monitor for security and safety throughout
- Field expedient technique
- Recycle or safely dispose of residue

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MECHANICAL CUTTING

- Stockpile disposal
- Requires special equipment
- Typically requires minimum of two cuts per weapon
- Removes metal in the process
- Cut all similar weapons in the same pattern
- Recycle or safely dispose of residue

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HYDRAULIC SHEARING OR BENDING

- Stockpile disposal
- Requires special equipment
- Can achieve high throughput rates
- Maintain destruction records
- Recycle or safely dispose of residue

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OPEN DETONATION

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- Stockpile disposal
- Address environmental concerns
- Effective for larger caliber and unstable munitions
- Requires highly trained personnel
- Requires large land area

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MELTING OR SHREDDING

- Stockpile disposal
- Remove non-metal parts
- Furnace reduces weapons to molten steel
- Suitable only if equipment exists
- Destruction is absolute
- Maintain destruction records
- Recycle or safely dispose of residue

FLIGHT RESTRICTIONS

- Flight altitude (200 m minimum)
- Used primarly for open detonation
- Establish process to report violations
- Ensure public safety

RESOURCE RECOVERY

- Stockpile disposal
- Disassemble ordnance to use components
- New infrastructure can be cost prohibitive
- Industrial capacity and infrastructure required
- High explosive has commercial use
- Address environmental concerns
- Recycle or safely dispose of residue

OPEN DETONATION

- Stockpile disposal
- Address environmental concerns
- Ensure perimeter security
- Survey after operation to confirm destruction

The Office of Weapons Removal and Abatement (PM/WRA)

The Office of Weapons Removal and Abatement is a division of the U.S. Department of State's Bureau of Political-Military Affairs (PM/WRA).

The Office develops, implements and monitors policy, programs and public engagement efforts to …

- curb the illicit proliferation of conventional weapons of war such as light automatic weapons and rocket-propelled grenades
- remove and destroy other materiel, such as landmines and excess stocks of munitions, which remain persistent threats to local populations and regional stability
- create local, regional and international conditions conducive to peace, stability and prosperity

For more information visit our website:
www.state.gov/t/pm/wra

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DOORS

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- Door made of steel
  (or 4.5 cm wood with 12 gauge steel plate)
- Frame anchored to building at 8 places
- Hinges welded to prevent pin removal
- Marked with UN Fire Division symbol
- Doors open OUTWARDS – cannot be rammed
- Light gauge handles break off easily – cannot be used to pull off door
- Door seam covered with metal strip – prevents lever from fitting inside

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FIREFIGHTING EQUIPMENT

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- Easily seen and accessed
- Only fight fires to save lives
- Conduct periodic checks

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SIGNS

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- List forbidden items
  (cell phones, flame-producing items etc)
- Identify restricted areas

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FENCES AND BARRIERS

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- A barrier within a barrier
- For Category I and II items barriers are WITHIN the installation boundaries
- Clear zones with unimpeded visibility:
  - 4 m inside
  - 10 m outside

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LOCKS

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- Must protect against manual manipulation (hammers, bars, etc) for at least 15 minutes
- Must protect against powered tools (drills, saws, etc) for at least 5 minutes

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AISLES

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- Aisles free of obstructions
- Wall clearances (15 cm minimum)
- Aisle widths (46 cm minimum)

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STACKS

- Store away from hot lights (OSCE: allow 15 cm between box and ceiling)
- Store away from walls – allows checking and air circulation (OSCE: allow 15 cm between stack and wall)
- Banded for security – too heavy to pick up

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LOT NUMBERS

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- Lot # segregation by date
- Oldest lot # in front (issue first)
- Newest lot # in back
- Segregate lot # by similar storage history
- Use to manage lot testing

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DUNNAGE

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Wood or metal

- Provides air circulation
- Allows equipment access
- Improves stability of stack

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RACKS

- Bolted or welded together to form a unit too heavy to easily move
- Made of metal
- Lockable
- Easy to see weapon serial numbers

SECURITY POST



- Armed attendant
- Entrance only to approved staff with a legitimate reason
- Maintain full records of authorizations and access
- Requires communications with safety personnel
- Alert system in place

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BOXES

- Inventory card on top of stack
- Loose rounds in brightly colored box
- Stored together by lot #

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RESOURCES ON THE WEB:

For more information on the importance of Physical Security and Stockpile Management (PSSM) and safe surplus destruction, access the following web sites:

- www.armee.ch
- www.dtra.mil
- www.iansa.org
- www.namsa.nato.int
- www.osce.org
- www.rasrinitiative.org
- www.seesac.org
- www.smallarmssurvey.org
- www.state.gov/t/pm/wra
- www.un-casa-isacs.org
- www.undp.org
- www.un.org/disarmament