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# International Nuclear Security

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# What will be Discussed

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1. **Definitions** of international nuclear security.
2. **What degree of security do we have now?**
3. **Limitations of a nuclear security strategy focused on national lock-downs of fissile materials and weapons.**
4. What do **current trends** say about the future?
5. How can nuclear security be **strengthened**?

# What is Nuclear Security?

- All states possessing nuclear and radiological materials know how much nuclear material they have, where it located, and whether it is adequately secured from theft or loss on a continuous, near-real-time basis.
- National nuclear security practices are afforded sufficient resources to maintain their effectiveness in the context of evolving threats.
- National nuclear security policies and practices are open to an appropriate level of international evaluation.
- All states have:
  - effective laws criminalizing the unauthorized possession or trafficking of nuclear materials
  - effective and enforceable strategic trade, export and border controls
- Authorities and resources are in place to quickly recover nuclear or radiological materials if they were stolen.
- All states with nuclear weapons have high degrees of weapons security and stabilizing nuclear postures.
- There is a far reduced risk of both nuclear war and nuclear terrorism.

# Do We Have it Now?

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## YES (minority position):

- No nuclear war
- No nuclear terrorism
- No confirmed loss of SQs of SNM

## NO (majority, at least in global north):

- Significant quantities of nuclear materials remain improperly secured
- Nuclear materials exist in too many locations
- Nuclear terrorism “the gravest security threat.”
- States make periodic nuclear threats
- Excess quantities of SNM exist and inventories are increasing in unstable regions

# Increasing the Effectiveness of National Nuclear Security may not be Enough

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- Risks “putting the fox in charge of the hen house.”
  - *Pakistan, DPRK* – Intentional proliferators?
  - *Pakistan* - Extremist insiders?
  - *Iran* - "the pre-eminent state sponsor of terrorism in the world,"\*
  - *Saudi Arabia* – Willing to buy nuclear arms from Pakistan?

\* U.S. State Dept. 2011

- Political and Military responses to nuclear crises in failed or proliferating states are limited and risky.
- There is currently no international means of enforcing effective nuclear stewardship and nonproliferation in governments that do not value these objectives.

# Nuclear Security Trends

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## Positive trends

- Reductions in Russian and NATO nuclear weapons
- Heightened concern and action
  - NSS process, pledges, HEU reduction, IMPC, GTRI, etc.
- Strengthened convention for PP and transportation
- New resources from IAEA, NTI, WINS
- Modernization of PP and MC&A systems
- Slight decrease in global terror activity

## Negative trends

- Increases in global inventories of weapons-grade fissile materials
- Increases in # of nuclear-armed states, proliferation pressures
- Growing weapons inventories in politically unstable states (Pak., DPRK).
- Nuclear arms build-up in South Asia
- Continued nuclear smuggling, terrorist attacks on nuclear facilities.
- Continued accidents and incidents.
- Diffusion of nuclear weapon design information.

# Nuclear Weapons and Materials Security Can Never be Perfect

- 7/12 – Infiltration of Y-12 “protected area.”
- 5/11 – Attack on Mehran navy base in Pakistan. (17 hours)
  - Attacks near Wah Ordnance Complex (2008), Kamra Air Weapon Complex (2007), Sargodha missile facility (2007).\*
- 2011 -2012 – Cyber attacks on Iranian nuclear facilities.
- 2008 – Deficiencies at NATO nuclear bases
- 11/2007 – U.S. Nuclear weapons flown mistakenly from Minot, ND to Barksdale, LA.
- 11/2007 – attack on Pelindaba, South African HEU site.



\*"The Terrorist Threat to Pakistan's Nuclear Weapons," Shaun Gregory, CTC Sentinel, July 2009, <http://www.ctc.usma.edu/wp-content/uploads/2010/07/CTCSentinel-Vol2Iss7.pdf>



# Quote of the Week

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“these anti-Christ nongovernmental terrorists, Christian militias up in Michigan that are getting ready for Armageddon, to kill for Jesus, or the Nazi party or the Taliban, might just as easily have gotten to where we got, with evil intention.”\*

***Michael R. Walli, (62) – Y-12 Infiltrator, Aug. 2012***

\* NYT, Aug. 8, 2012, <http://www.nytimes.com/2012/08/08/us/pacifists-who-broke-into-nuclear-weapon-facility-due-in-court.html? r=1>

# How Can Nuclear Security be Strengthened?

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- **More accurate baseline inventories**
- **Better physical protection, control and accounting**
- **Effective personnel reliability programs**
- **Minimize weapons-usable materials and consolidate to fewer locations**
- **Consider local threat environment when siting facilities**
- **Implement pledges made in the NSS process**
- **More robust interdiction, emergency response and special operations capabilities.**
  - International cooperation is desirable, but not always possible

# Incremental vs. Fundamental Change

- **Strategy focused on improving nuclear weapons and nuclear materials security offers incremental gains and must overcome strong negative trends in some regions.**
  - Its prospects for long-term success are limited
- **Strategy focused on global elimination of nuclear weapons and weapons-grade nuclear materials is more difficult and uncertain, but if achieved, offers fundamental improvement in nuclear security.**
  - This was realized early in the atomic age and is integral part of the NPT.
  - It is why President Obama is committed to seeking the security of a world without nuclear weapons.

***Both strategies must be pursued simultaneously***