

National Academy of Sciences
CTR Symposium
September 18, 2017

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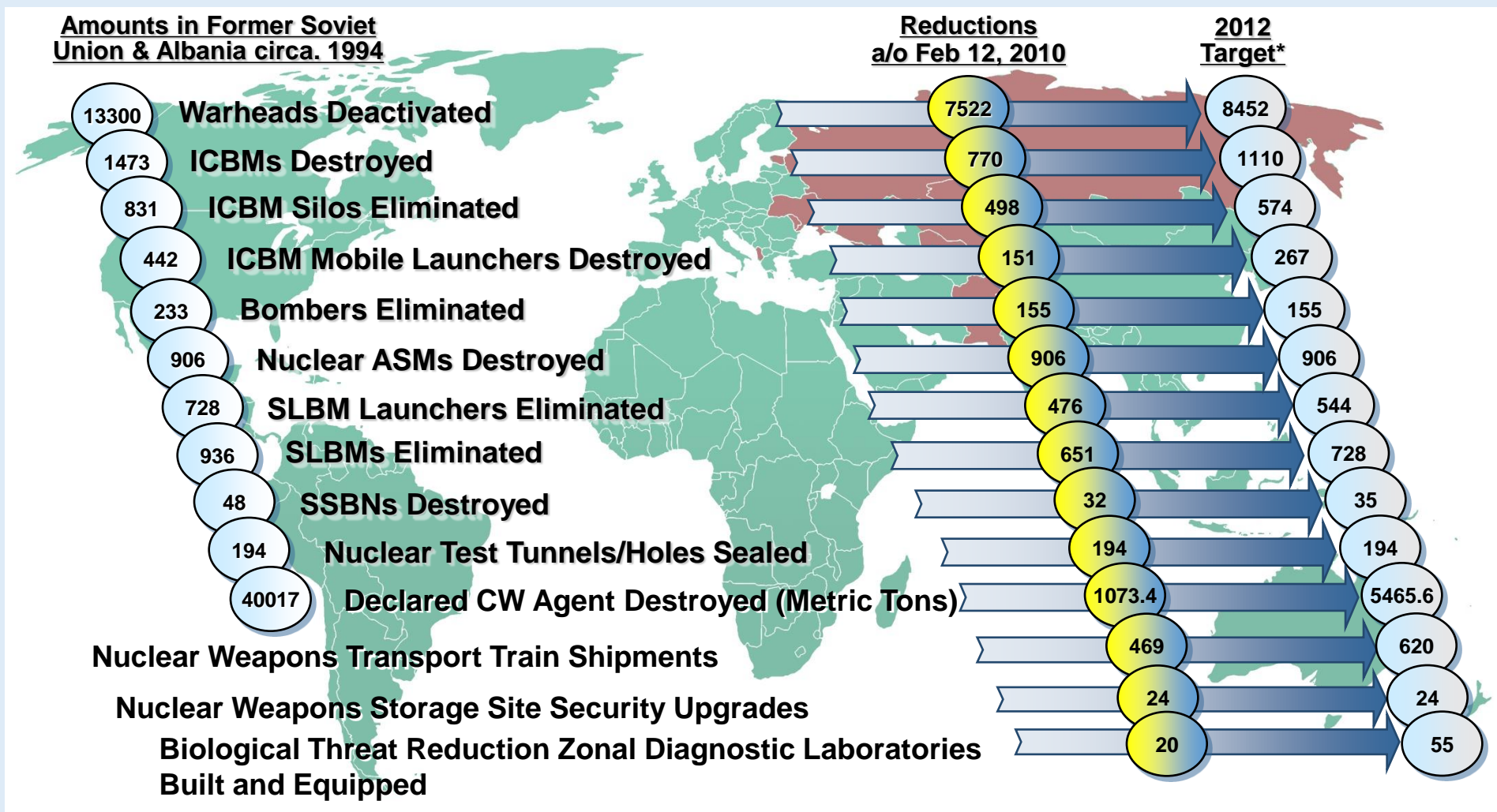
Session 1: Brief History of CTR and CTR 2.0

Presentation Topic:

The impact of CTR programs on reducing the threat from nuclear weapons and delivery systems and the future of nuclear CTR.

CTR Scorecard Circa 2010

Ukraine, Kazakhstan, & Belarus are Nuclear Weapons Free, Albania is Chemical Weapons Free

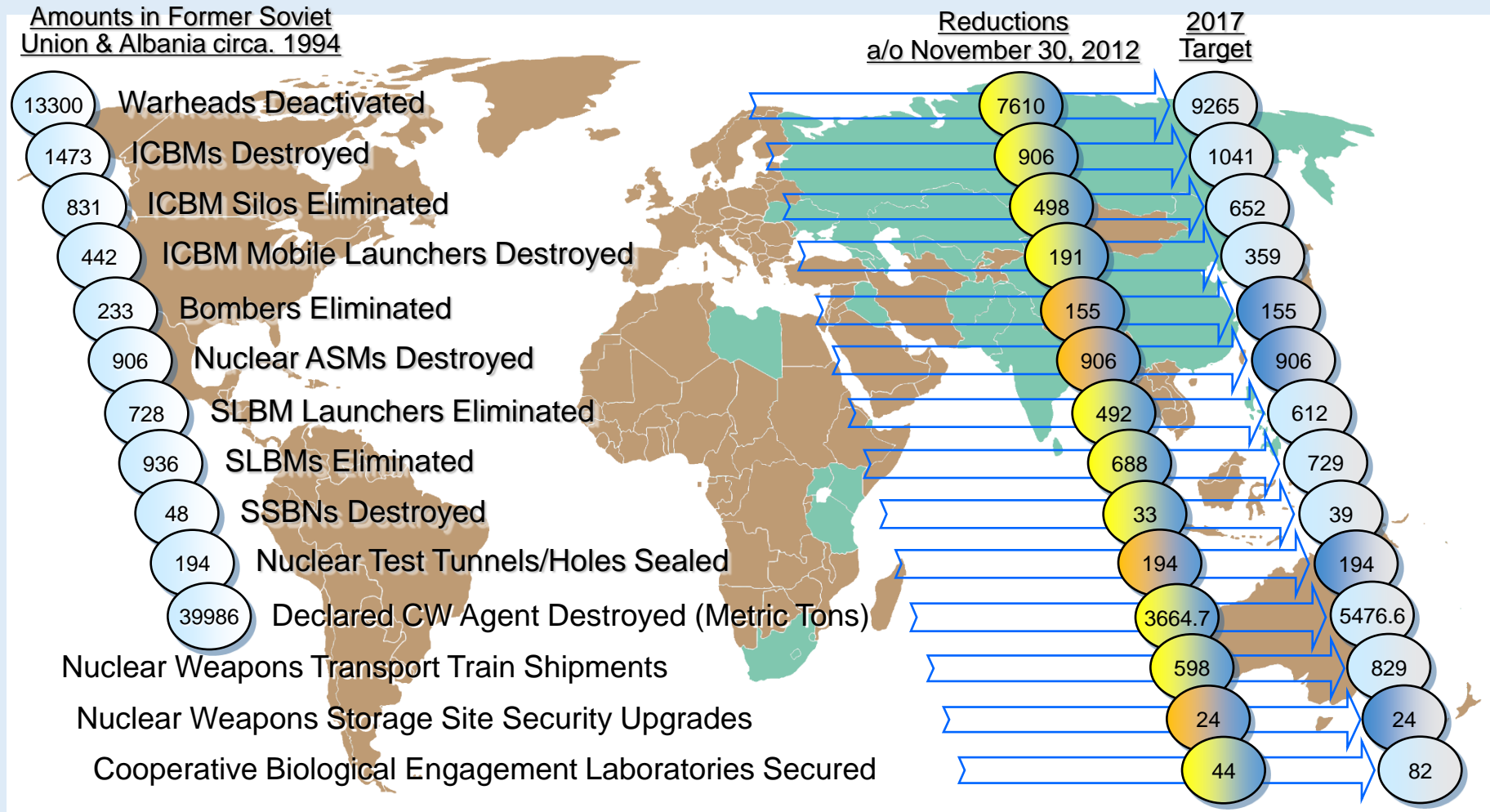


CTR partner states
Rest of the world

*Date of Projection: 12/31/08

CTR Scorecard Circa 2012

Ukraine, Kazakhstan, & Belarus are Nuclear Weapons Free, Albania is Chemical Weapons Free



CTR Scorecard Circa 2015

Fiscal Year 2015

CTR-to-Date

STRATEGIC OFFENSIVE ARMS ELIMINATION (SOAE)

0 Warheads Deactivated
0 Missiles Destroyed
(ICBM + SLBMs + ASMs)
0 Launchers & Silos Destroyed
N/A Bombers Destroyed
N/A Subs Decommissioned

7,616 Warheads Deactivated
2,531 Missiles Destroyed
(ICBM + SLBMs + ASMs)
1,187 Launchers & Silos Destroyed
155 Bombers Destroyed
33 Subs Decommissioned

CHEMICAL WEAPONS DESTRUCTION (CWD)

605.7 Agent Destroyed (in tons)
0 Sites Secured

4,733.5 Agent Destroyed (in tons)
10 Sites Secured

GLOBAL NUCLEAR SECURITY (GNS)

N/A Sites Secured
N/A Nuclear Test Tunnels/
Holes Sealed
3 Shipments

24 Sites Secured
194 Nuclear Test Tunnels/
Holes Sealed
619 Shipments

Additional CTR Impacts of Nuclear Weapons & Delivery Systems Programs

- US-Russian Relations & Foreign Policy.
 - CTR nuclear cooperation provided a cornerstone program of mutual interest. Went beyond arms control in terms of cooperation, access, and even to the strategic, tactical, and component systems addressed.
 - CTR program success was possible because the program with Russia was isolated from larger foreign policy developments. Received high level attention and support regardless of political environment.
 - Enabled key communications channels even in times of stressful relations.
 - Nuclear Weapons cooperative programs enabled engagement on premier aspects of National Defense and recognition of equal partnership as 2 largest nuclear superpowers.
- Military to Military Cooperation.
 - Cooperation in the Defense Sector is critically important.
 - Cooperation with Ministries and services responsible for nuclear weapons and delivery systems is essential for mutual appreciation, respect.

Additional CTR Impacts of Nuclear Programs

- Long Term impacts of Nuclear Programs established a legacy that is still in place in Russia.
 - Establishment of a nuclear security contractor community, security & nonproliferation culture.
 - Nuclear Security Center of Excellence.
 - Establishment of processes, procedures, and budgets to secure weapons and eliminate systems.
 - Risks of nuclear incident were mitigated – what would have happened without them?
- Attempts to establish a long term, sustained relationship with Russia were not successful.
 - Mil-to-Mil technical exchanges on best practices explored.
 - Joint Training, Exercises, R&D explored.
 - Joint efforts to assist other countries explored.
- Such efforts held promise for mutual benefit, but agreements, forums, budgets, and support were lacking on both sides, rejected by Russia.

Looking Back at the 2009 NAS CTR 2.0 Report

- Recommendations for expansion beyond Russia and FSU, and supporting CTR as tool of foreign policy are still valid. However:
 - Increased attention and focus to re-establish long term long term, sustained cooperation on nuclear programs with Russia and FSU such as joint exercises, training, joint R&D.
 - Expansion should include efforts to address nuclear programs to other nuclear powers and countries that possess major WMD capabilities: Russia, China, India, Pakistan, Iran, North Korea.
 - Increased attention to Defense Sector (Mil to Mil) and on Nuclear Weapons & Delivery Systems in particular.
- Recommendation to Support Treaties and Agreements such as G8, PSI, UNSCR 1540, GICNT still valid:
 - Such multilateral forums may be helpful as a bridge. Can more be done to leverage such agreements to expand CTR aperture? Can/should new bilateral forums be considered?

Looking Back at the 2009 NAS CTR 2.0 Report

- Recommendation to review and reformulate the DOD CTR program to include broader military components, including the Unified Combatant Commands is more important than ever:
 - STRATCOM and other Combatant Command support for the nuclear programs were important for the CTR program early on.
 - CTR can offer security cooperation tools that can fill both short term and long term gaps and seams.
 - SOCOM has assumed lead as CWMD coordinating authority under the Unified Command Plan (UCP).
 - Important to integrate CTR efforts into the CWMD Global Campaign Plan and assessments, in particular any nuclear programs. How can/do CTR programs help to “Attack the Counterproliferation Threat Networks?”

The Future of Nuclear CTR

- For nuclear, engage through P-5 (US, UK, France, China, Russia). Technical level working group.
 - Security for nuclear weapons/materials, address missile and delivery systems.
 - Expand to Strategic and Tactical systems. Missile Defense systems?
 - Support to future arms control efforts? P5+2, India-Pakistan?
 - Forum that can address cooperation across spectrum of Joint exchanges, planning, response, exercises, R&D, forensics, accountability, tracking, detecting, interdicting, etc.
- Defense and Military Cooperation is hard, but necessary.
 - Takes patience and persistence, especially with rivals/former adversaries/potential future adversaries, non-allied partners - but needs to be part of the future CTR program.
 - CTR as a means to re-establish mil-to-mil engagement with Russia.

The Future of Nuclear CTR

- Expand the CTR approach on nuclear programs.
 - In addition to protecting at the source, eliminating in place, protecting borders, also think about attack the network to prevent proliferation, attack the precursors, facilities, infrastructure, materials, etc.
 - Need to overcome the need to demonstrate imminent danger (assembled weapon, weapons usable material), consider security or elimination of missile fuel, materials, components, gyroscopes, protection against cyber threats, etc.
 - New metrics may be needed
- Closer cooperation/integration/synchronization with Combatant Commands and Security Cooperation Community.