

# The New Paradigm for Nuclear Weapons

“Today, the cold war has disappeared but thousands of those weapons have not. In a strange turn of history, the threat of global nuclear war has gone down, but the risk of a nuclear attack has gone up. More nations have acquired these weapons. Testing has continued. Black markets trade in nuclear secrets and materials. The technology to build a bomb has spread. Terrorists are determined to buy, build or steal one... Some argue that the spread of these weapons cannot be checked—that we are destined to live in a world where more nations and more people

possess the ultimate tools of destruction.

This fatalism is a deadly adversary. For if we believe that the spread of nuclear weapons is inevitable, then we are admitting to ourselves that the

use of nuclear weapons is inevitable...

So today, I state clearly and with conviction America’s commitment to seek the peace and security of

**a world without nuclear weapons.**

I’m not naive. This goal will not be reached quickly—perhaps not in my lifetime. It will take patience and persistence. But now we, too, must ignore the voices who tell us that the world cannot change.” BARACK OBAMA, PRAGUE, 2009

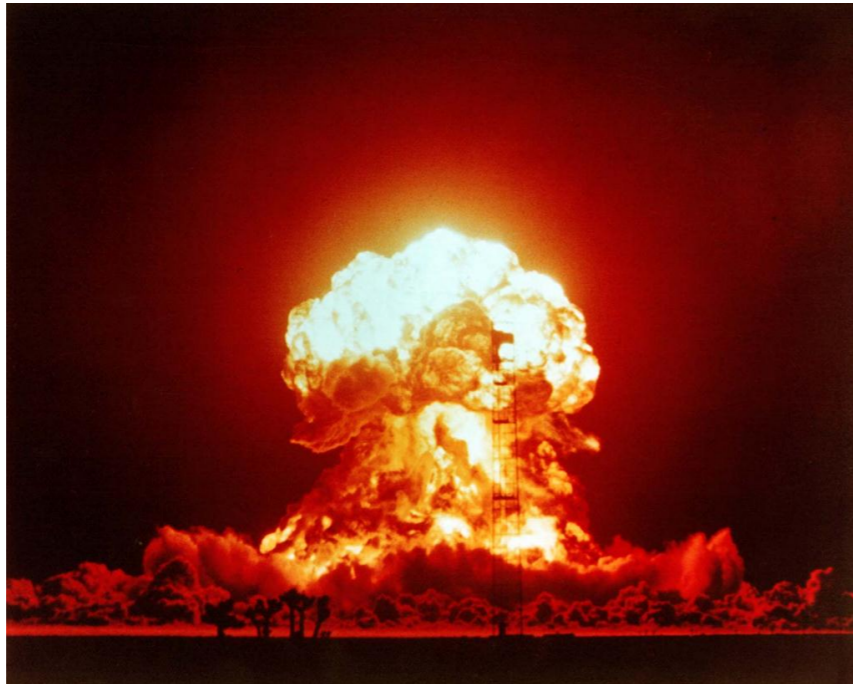
# What Are We Talking About Today?

- History
- The New Paradigm:  
Making It Happen
- The New Paradigm:  
Political Issues & Realities





# A Brief History of Everything (Nuclear)



# Survival (1945-1967)

- Bombings of Hiroshima & Nagasaki, August 1945: *Nuclear Attack = the Lesser Evil*
- Cold War and development of basic concepts of deterrence (*think Mutually Assured Destruction*)
- Cuban Missile Crisis, 1962
- Massive build-up of U.S. and Soviet arsenals & ever destructive hydrogen bombs



# Stability (1968-1992)



- 1968: Nonproliferation Treaty (NPT)
- Development of nonproliferation regime including International Atomic Energy Agency (IAEA)
- Arms Control Treaties: SALT I & II (1970s); START I (1991): Largest arms control treaty → resulted in 80% reduction of strategic nuclear arms
- 1986: Reagan and Gorbachev Reykjavik Summit

# Our commitment to disarmament started here:

## **1968 Nuclear Non-Proliferation Treaty, Article VI:**

“Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.”

## **United States Constitution, Article VI:**

“... all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land...”

**This has NEVER meant unilateral disarmament!**

# Current Key Players

## Five nuclear powers recognized by NPT:

- United States
- Russia
- China
- United Kingdom
- France

## Two nuclear powers outside NPT:

- India
- Pakistan

## Two suspected nuclear powers outside NPT:

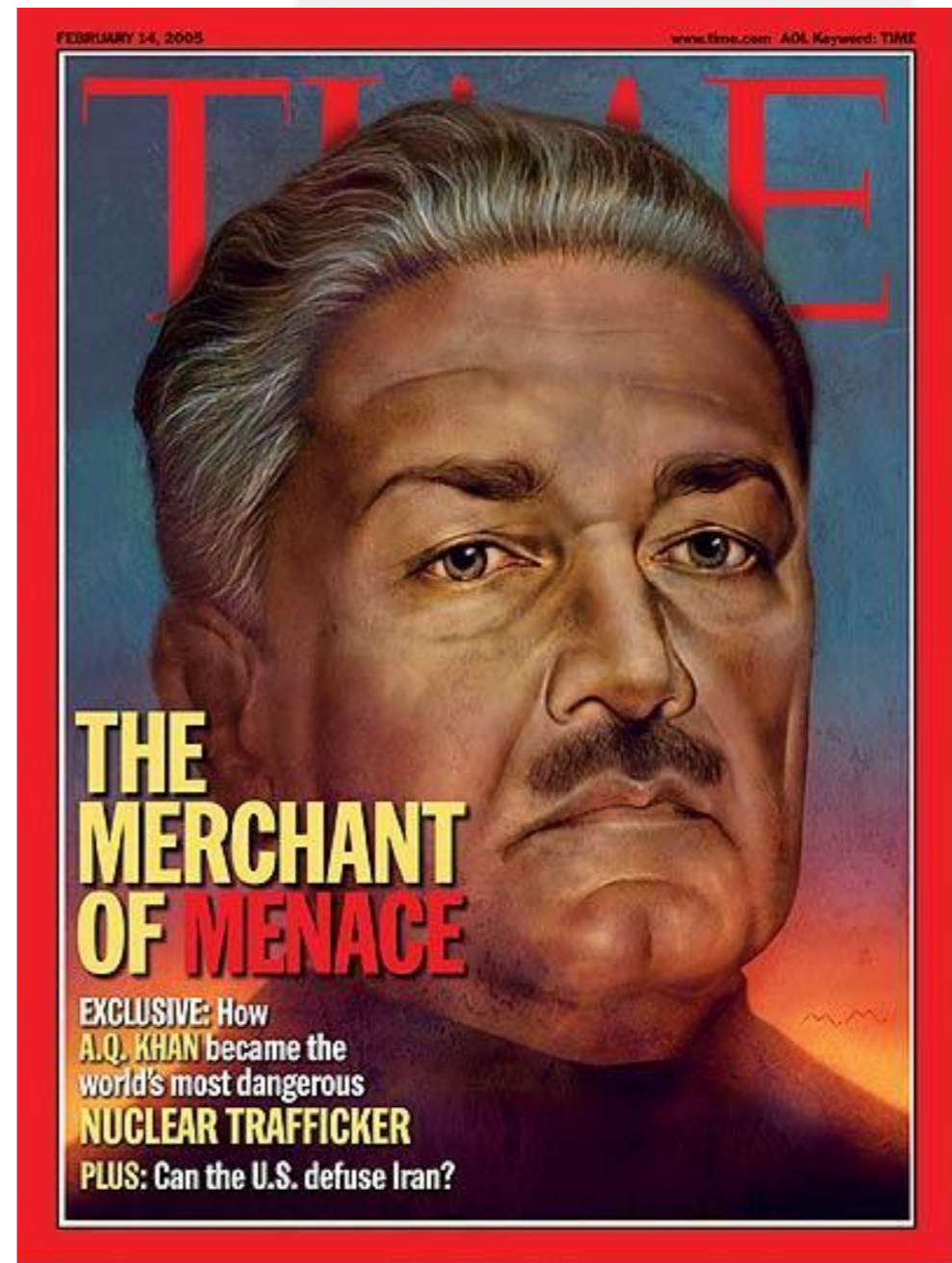
- Israel
- North Korea



Statistics from the Center for Defense Information, as of January 21, 2009

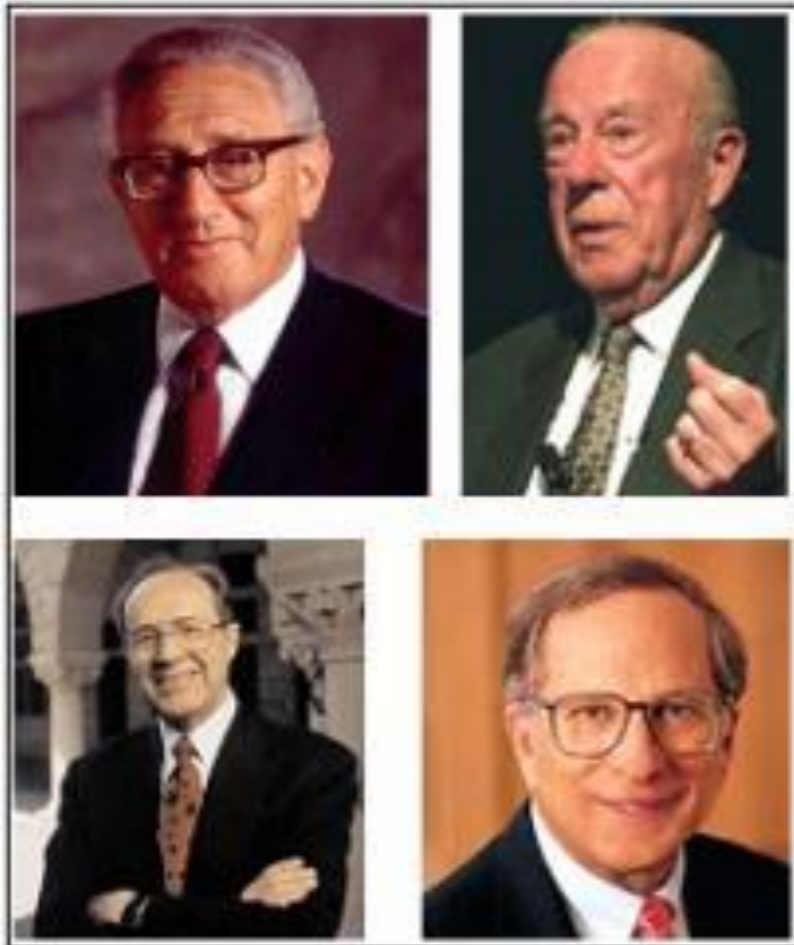
# Complacency (1993-2010)

- India and Pakistan test nuclear weapons
- + *Era of Rogue Proliferation:*
  - Libya (until 2003)
  - North Korea
  - Iran
  - Syria?
  - A.Q. Khan Network Exposed
  - Al Qaeda seeking WMD?



# The Four Statesmen and the New Nuclear Paradigm

*January 4, 2007 - George Schultz, William Perry, Henry Kissinger, and Sam Nunn publish an op-ed titled “A World Free of Nuclear Weapons”*



## **Bipartisan effort:**

- Two Democrats and Two Republicans

## **Two major reasons:**

- Deterrence is “decreasingly effective” for maintaining international security
- Terrorists could acquire nuclear weapons

# The Logic of a New Paradigm Takes Root



**President Barack Obama, Prague, April 5, 2009**



**French President Nicolas Sarkozy letter to UN SG, December 5, 2008**

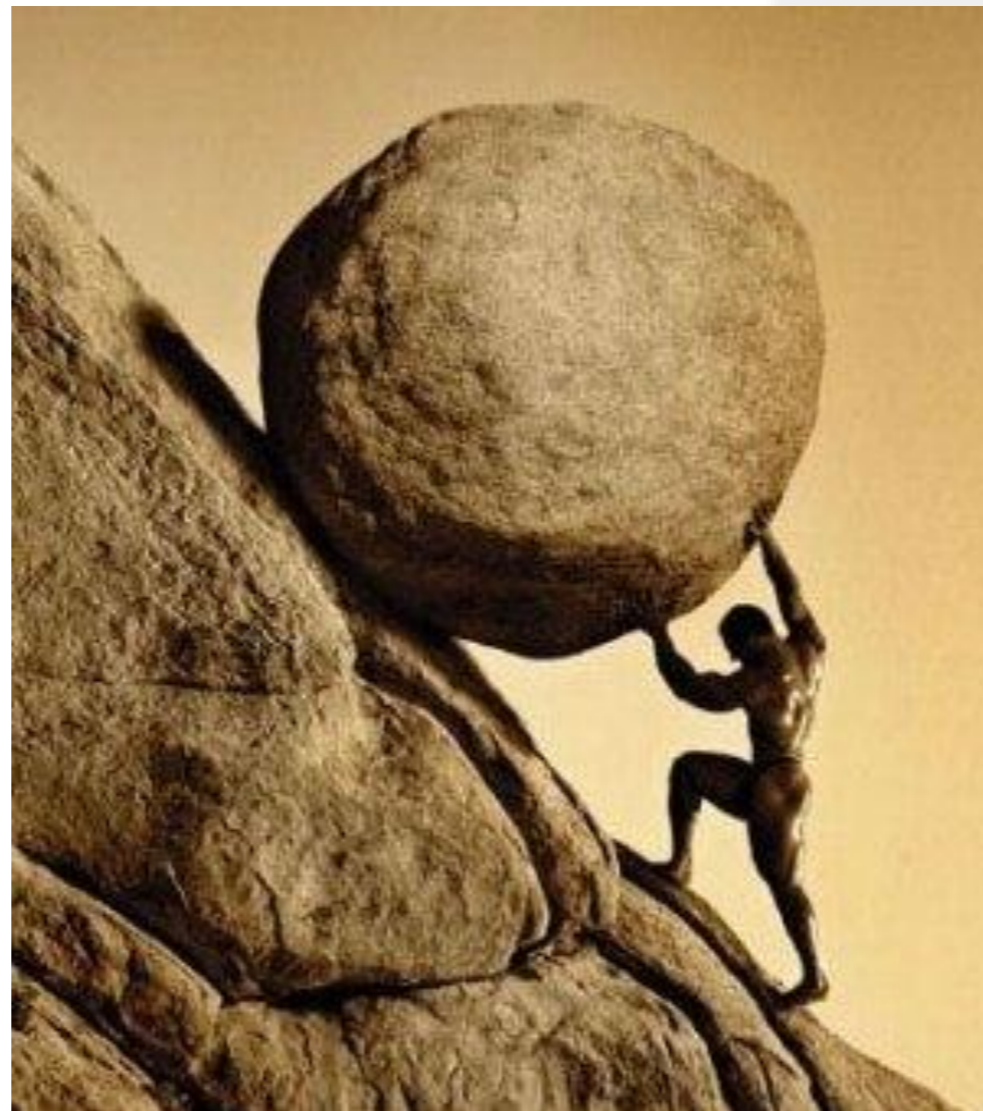
**British PM Gordon Brown, London, March 17, 2009**



**Russian Foreign Minister Sergei Lavrov speech to UN CD, March 7, 2009**



# The New Paradigm: Making it Happen



# Treaty Ratification Part I: START

- 1991: START I aimed to reduce US-Soviet (now US-Russian) nuclear arsenal.
- Dec. 5, 2009: START I expired.
- April 8, 2010: Presidents Obama and Medvedev signed the New START Treaty in Prague.
- Sept. 16, 2010: The US Senate Committee on Foreign Relations passed the Treaty onto the full Senate for ratification.
- December 22, 2010: US Senate ratified by a vote of 71 to 26 after lengthy debates in a lame duck session.
- February 2, 2011: President Obama finalizes ratification.
- April 6, 2011: United States and Russia are allowed to inspect each other's nuclear weapons facilities under the conditions of the new treaty.



# Key Elements of the New START Treaty

- 1) ~2,000 → **1,550** warhead limit;
- 2) 1,600 strategic delivery vehicles →
  - a) **800** deployed and non-deployed ICBM / SLBM launchers, and heavy bombers;
  - b) and **700** deployed ICBMs, SLBMs, and heavy bombers;
- 3) **More robust** verification regime;
- 4) **No barriers** to development of BMDS or conventional global strike capability;



# Why was it so difficult to ratify START?



## On the Hill:

- Sen. Jon Kyl (R-AZ)
- Republican party coalition & ‘Don’t Ask, Don’t Tell’
- Tea Party candidates



## In Security Policy Circles:

- Harold Brown (Sec. of Defense under Carter)

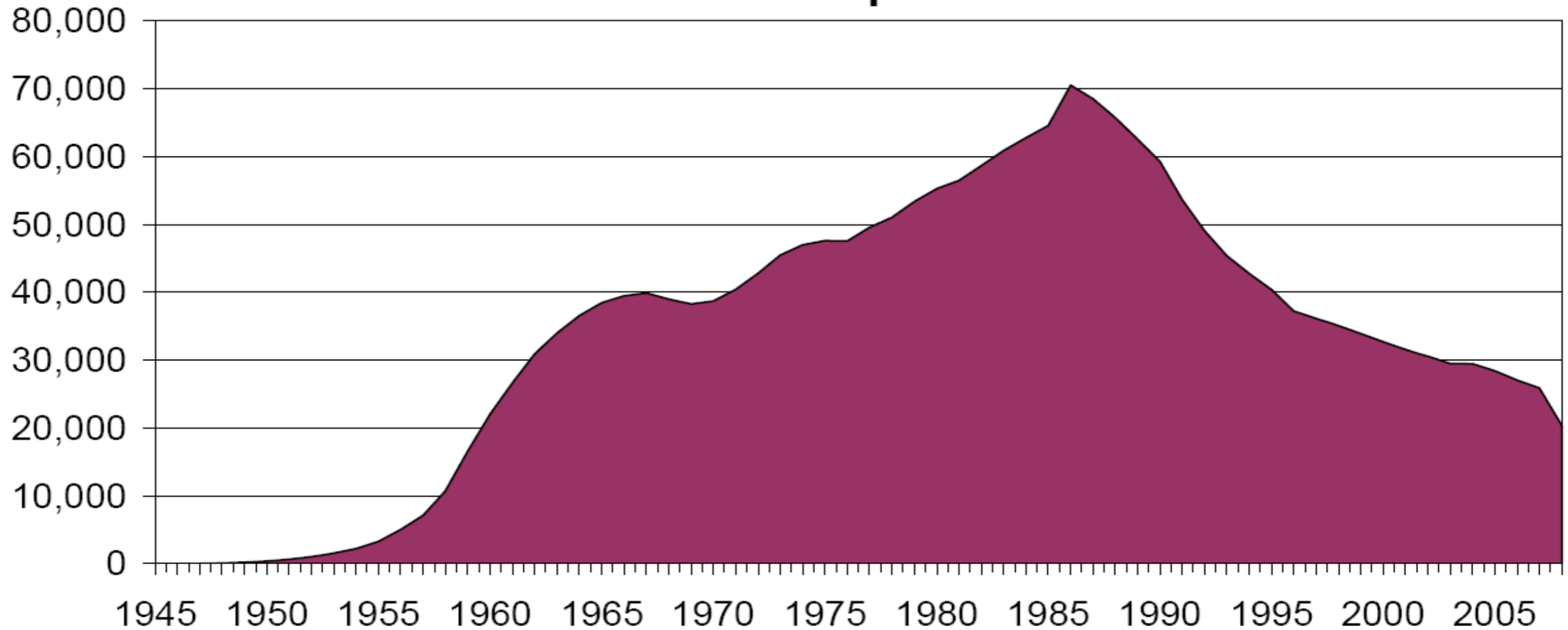
## However:

- Support from Defense Secretary Gates and top military leaders made opposition difficult for Republicans and conservatives.

# Reduce Global Nuclear Stockpiles

A policy in place since 1980s has allowed the world's two greatest nuclear powers to drive down global stockpiles.

**Global Nuclear Stockpiles 1945-2008**



© Hans M. Kristensen and Robert S. Norris, Federation of American Scientists and Natural Resources Defense Council, 2008

# Why was it necessary to ratify START?

- The fewer nuclear weapons in the world, the less likely it is that terrorists get their hands on them.
- NOT renewing START would have marked a major departure from the bipartisan national security consensus.
- Renewing START was a “mandate” decision for U.S. leadership on nuclear policy



# How Do We Implement a New Way Forward? The Prague Agenda (since April 2009)

- 1) Strengthen international treaty regimes: START, CTBT, FMCT
- 2) Change in nuclear posture and strategy

*Monitoring and controlling all sources of fissile material while reducing global stockpiles of nuclear weapons is critical to achieving the Prague Agenda*

# Treaty Ratification Part II: CTBT

- The Comprehensive Test Ban Treaty (CTBT) “prohibits any nuclear weapon test explosion or any other nuclear explosion.”
- CTBT would help curb the spread of nuclear weapons and establish a global monitoring network to detect and deter cheating.
- In 1996, the United States was the first nation to sign the CTBT but failed to ratify it in 1999.



# Why CTBT, Why Now?

*We've made it 13 years without ratifying it. Why now?*

- It would restore U.S. moral leadership.
- Motivates other states to ratify, potentially including China and India.
- Provides an important legal constraint on testing by non-NPT signatories, including rogue states.
- Secures U.S. advantage in technological advancement of arsenal.
- Identified as a critical first step toward advancing the new nuclear policy.

# Treaty Ratification Part III: Fissile Material Cutoff Treaty



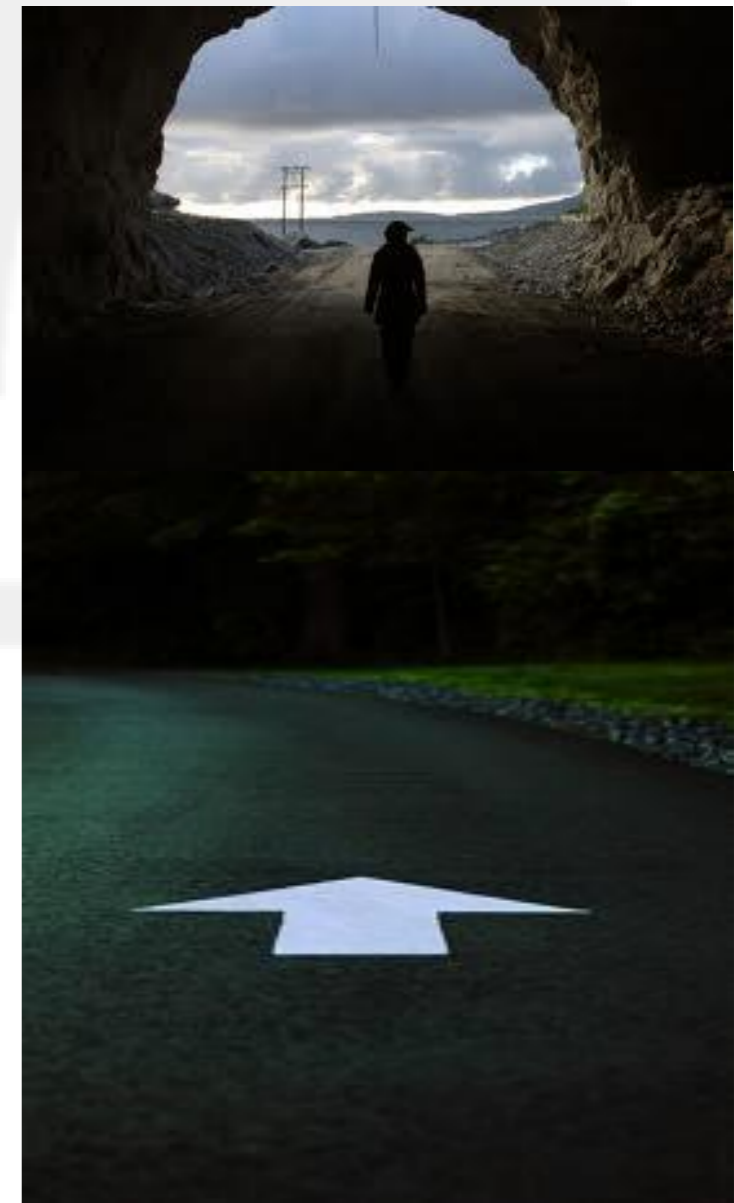
- May 29, 2009: Obama restated his commitment to the passage of a verifiable FMCT
- 2009: The Conference on Disarmament (CD) has resumed FMCT talks and unanimously agreed to resume arms control talks.
- Bipartisan support for an FMCT exists in the U.S., including public support from Senator John McCain (June 3, 2009).
- Pakistan has blocked any further progress on an FMCT, citing strategic parity with India as central to achieving an agreement.

# Change in Nuclear Strategy: Nuclear Posture Review 2010

- **1994:** Nuclear Posture Review established to determine the role of nuclear weapons in U.S. security strategy.
- **2002:** Pentagon asked to draft plan to be able to use nuclear weapons against some rogue states, & develop new weapons (“Bunker Busters”)
- **2010:** Big shifts!
  - 1. The U.S. promises to not use nuclear weapons against non-weapons states (if they are in compliance with their NPT obligations).
  - 2. The U.S. actually limits stockpile: deployed warheads reduced from 1,700 to 1,550.
  - 3. The U.S. will continue to provide a nuclear shield for its allies.
  - 4. The U.S. will not develop any new weapons.
  - 5. The U.S. will not conduct nuclear testing and will seek ratification of the CTBT.

# Other Major Upcoming Developments

- **Annual UN Conference on Disarmament:**  
Efforts continue to negotiate an FMCT, despite Pakistan's resistance.
- **2012:**
  - Nuclear Security Summit Conference in Seoul
  - Conference to establish a Middle East zone free of nuclear weapons and all other WMDs
- **2015: 5-Year U.S. NPT Review:**  
The next meeting will likely focus on CTBT, FMCT, the Middle East free zone, and the status of potential proliferators.



# The New Paradigm: Questions, Challenges, & Tough Realities



# Four Key Challenges

1. Verification
2. The Deterrence Dilemma
3. Nuclear Policy in the Political Playing Field
4. Nuclear Energy



# Can Compliance Be Verified?



Significantly complicated by the black market weapons trade.

# Deterrence: Can Terrorists Be Deterred?

- Does the logic of deterrence still hold when non-state terrorist actors present a primary threat?
- Without the geographic constraints imposed by nationhood, terrorist networks are not threatened by nuclear weapons in traditional ways.



# Extended Deterrence: The Importance of Reassuring our Allies

- Maintaining the U.S nuclear umbrella is a critical element in preventing further proliferation.
- Nations such as Japan rely on the U.S. nuclear umbrella to deter attack from its regional threats, such as North Korea.



# International / Regional Security Dilemmas

- Ongoing conflicts and tensions make nuclear states reluctant to forfeit their weapons and non-nuclear states consider developing them.
- Tensions between India / Pakistan have, and likely will, present major obstacles to progress.
- Developing nuclear power adds a new layer to security issues: How to verify that nuclear materials & technology will only be used for peaceful purposes?



# “The Nuclear Renaissance”

- Article IV of the NPT guarantees access to nuke technology for non-nuclear weapons states (184 countries)
- A greater number of countries are legally pursuing nuclear technology for “peaceful means” = nuclear energy.
- Incentives to use nuclear energy to reduce carbon emissions and to increase infrastructure development
  - Even Obama endorsed nuclear energy in March 30, 2011 “Blueprint for a Secure Energy Future”!
- **HOWEVER**, *this can increase the risk of fissile materials getting into dangerous hands.*

## Bottom line:

The greatest potential threat to U.S. national security...



...is terrorists bent on delivering a devastating blow against the U.S.  
obtaining a nuclear weapon.

→ *The logic of deterrence has lost its logic.*

# Further Reading

George Schultz, William Perry, Henry Kissinger, and Sam Nunn, “A World Free of Nuclear Weapons,” *Wall Street Journal*, January 4, 2007, <http://www.hoover.org/publications/digest/6731276.html>

Christopher Chyba and J.D. Crouch, “Understanding the U.S. Nuclear Weapons Debate,” *The Washington Quarterly*, 32:3 pp. 21-36, [http://twq.com/09july/docs/09jul\\_ChybaCrouch.pdf](http://twq.com/09july/docs/09jul_ChybaCrouch.pdf)

Jackie Calmes, “For the President, a Moment to Reflect, and Then to Depart,” *The New York Times*, December 22, 2010, <http://www.nytimes.com/2010/12/23/us/politics/23obama.html>

“Reykjavik Revisited: Steps Toward a World Free of Nuclear Weapons,” The Hoover Institution, October 2007 <http://www.hoover.org/publications/books/online/15766737.html>

Sharon Squassoni, “The New Disarmament Discussion,” *Current History*, January 2009 <http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=22596>

George Perkovich, James Acton et al., “Abolishing Nuclear Weapons: A Debate,” Carnegie Endowment Report, February 2009 <http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=22748>

George Perkovich & Patricia Lewis, “The Vantage Point,” ICNND Research Paper, January 2009 <http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=22900>

Brian Finlay, “The Limits of Zero: How the Rush to Abolition May Not Make Us More Secure,” The Henry L. Stimson Center, January 22, 2008, <http://www.stimson.org/pub.cfm?id=499>

Michael Krepon, “Getting to Zero,” The Henry L. Stimson Center, March 6, 2009 <http://www.stimson.org/pub.cfm?id=761>

# Further Resources

Carnegie Endowment disarmament page -

<http://www.carnegieendowment.org/topic/index.cfm?fa=viewTopic&topic=3000137>

CSIS Project on Nuclear Issues - <http://forums.csis.org/poni>

International Commission on Nuclear Nonproliferation and Disarmament - <http://www.icnnd.org>

Nuclear Security Project - <http://www.nuclearsecurityproject.org>

United Nations Institute for Disarmament Research - <http://www.unidir.org>

Ploughshares Fund - <http://www.ploughshares.org>

Arms Control Association - <http://www.armscontrol.org/>

Project for the CTBT - <http://www.projectforthectbt.org/>



# **Additional Background Slides**



# Further Reasons for Shifting the Paradigm and Securing Treaty Ratification:

- 1) A reduction in the number of weapons makes the goal of verification and safeguarding materials more possible.
- 2) Fewer weapons reduces the chance of nuclear conflict and annihilation.
- 3) How can we expect others to forego something we insist on retaining for ourselves? The framework is critical to smart disarmament.

# “The Grand Bargain” behind the NPT

- 1) **Nonproliferation:** Articles I & II prohibit non-nuclear weapons states from obtaining weapons through transfer or development (184 countries at present)
- 2) **Disarmament:** Article VI requires nuclear weapons states to undertake negotiations on disarmament (5 recognized nuclear power: P-5 of the U.N. Security Council)
- 3) **Peaceful use of nuclear energy:** Article IV guarantees access to peaceful nuclear energy for non-nuclear weapons states (184 countries)

# Status of World Nuclear Forces 2010\*

<u>Country</u>	<u>Strategic</u>	<u>Non-Strategic</u>	<u>Operational</u>	<u>Total Inventory</u>
Russia	2,600	2,050 <sup>a</sup>	4,650	12,000 <sup>b</sup>
United States	1,968	500 <sup>c</sup>	2,468 <sup>d</sup>	9,600 <sup>e</sup>
France	300	n.a.	~300	300 <sup>f</sup>
China	180	?	~180	240 <sup>g</sup>
United Kingdom	160	n.a.	<160	225 <sup>b</sup>
Israel	80	n.a.	n.a.	80 <sup>i</sup>
Pakistan	70-90	n.a.	n.a.	70-90 <sup>i</sup>
India	60-80	n.a.	n.a.	60-80 <sup>i</sup>
North Korea	<10	n.a.	n.a.	<10 <sup>j</sup>
<b>Total:</b>	<b>~5,400<sup>k</sup></b>	<b>~2,550<sup>k</sup></b>	<b>~7,700<sup>k</sup></b>	<b>~22,600<sup>k</sup></b>

\*See notes.