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Nuclear Arms Control in 2013

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Introduction

- This PowerPoint describes key nuclear arms control issues as of mid-2013 and issues for future negotiations, including
  - New START
  - Possible next steps on strategic forces
  - Non-strategic nuclear weapons
  - Missile defense issues

New Strategic Arms Reduction Treaty (New START)

New START

- Signed in April 2010 in Prague
- Entered into force in February 2011

Main Treaty Provisions

- US and Russia limited to no more than
  - 700 deployed strategic delivery vehicles
  - 800 deployed and non-deployed launchers
  - 1550 deployed strategic warheads
- Limits to be implemented by February 2018
- Verification measures include data exchange, notifications, on-site inspections

Deployed Strategic Delivery Vehicle (SDV) Limit

- 700 deployed strategic delivery vehicles
  - ICBMs
  - SLBMs
  - Nuclear-capable bombers
- "Deployed" missiles are in silos or launch tubes on submarines

Deployed and Non-Deployed Launcher Limit

- 800 deployed and non-deployed ICBM/SLBM launchers and nuclear-capable bombers
  - "Non-deployed" launchers are ICBM silos or launch tubes on submarines that contain *no* missile

Deployed Warhead Limit

- Each side limited to 1550 warheads on deployed strategic delivery vehicles
  - All warheads on deployed ICBMs/SLBMs count
  - Each deployed nuclear-capable bomber attributed as one warhead
    - Arms control traditionally has given bombers preferential treatment (long flight times make them less usable in a surprise attack)

Treaty Implementation

- Since treaty entered into force
  - Four data exchange updates
  - 4500+ treaty notifications exchanged
- Each side allowed to conduct 18 inspections per year; as of June 13
  - US conducted 7 inspections in Russia during treaty year 3 (began February 2013)
  - Russia conducted 8 inspections in US during treaty year 3 (began February 2013)

New START Numbers, March 2013

New START Limit	US	Russia
Deployed SDVs (700)	792	492
Deployed/non-deployed launchers and HBs (800)	1028	900
Deployed warheads (1550)	1654	1480

Notional US Force When New START Fully Implemented

	New START Limits		
	700[1]	800[2]	1550
ICBM systems	400	450	400
SLBM systems	240	280	1090
Bombers	60	60	60

Notes:

1 Assumes US deploys 400 ICBMs and 60 nuclear-capable bombers; US might instead deploy 420 ICBMs and 40 bombers or some mix in between

2 Room for 10 additional "non-deployed" launchers under 800 limit

Next Steps on Strategic Forces

US Views on Next Steps

- President Obama on June 19 called for US and Russia to negotiate further reductions to one-third below New START levels
  - Would cut each side from 1550 to 1000-1100 deployed strategic warheads

Russian Views on Next Steps

- Little enthusiasm for new negotiations
  - Link further reductions to issues like missile defense and multilateralization of reductions
- But Moscow may have incentives to engage
  - US can stay at New START levels with current force structure; Russia must build new subs and missiles or fall well below New START levels
  - US has advantage in reserve strategic warheads

Key Issues Raised by Russia

- Missile defense – see slides 30-35
- Multilateralization – US and Russia control more than 90% of world's nuclear weapons
  - US and Russia could each cut stockpiles in half and remain 6-7 times larger than next power
  - Instead of multilateral negotiation, ask UK, France and China to make unilateral no-increase commitments?

World's Nuclear Powers

Country	Military Stockpile
US	4650
Russia	4500
France	300
China	250
UK	225
Israel	80
Pakistan	110-120
India	90-110
North Korea	<10

Key Strategic Questions for Next Negotiation

- Reduce New START's 700/800 limits as well as 1550 deployed strategic warhead limit?
- Revisit bomber weapon counting rule?
- Limit reserve strategic warheads?
- Form of agreement
  - Legally binding treaty or protocol?
  - Less formal arrangement, e.g., politically-agreed parallel reductions?

Limiting Nuclear Weapons Other Than Deployed Strategic

Time to Include Other Weapons?

- New START limits only deployed strategic warheads, covering only part of US and Russian nuclear stockpiles
  - Non-deployed (reserve) strategic warheads not constrained
  - Non-strategic (tactical) nuclear weapons not constrained

Estimated US, Russia Nuclear Warhead Levels

	US	Russia
Deployed strategic *	~1950	~1740
Nonstrategic (tactical)	~500	~2000
Non-deployed (reserve) strategic	~2200	~700
(Stockpile)	(~4650)	(~4450)
Retired warheads **	~3000	~4000
Total warheads	~7700	~8500

* Estimated actual number, not New START accountable number

** Retired warheads have been removed from stockpile and await dismantlement

Interest in Broadening

- US allies concerned about Russian advantage in non-strategic weapons
- Senate in 2010 asked administration to seek to negotiate reduction of Russian advantage in non-strategic weapons
- Russian military interested in reducing US advantage in reserve strategic weapons?

Non-Strategic Nuclear Weapons (NSNW)

Current NSNW Balance

	US	Russia*
Air-Delivered	500	~730
Anti-Missile/Air Defense	0	~430
Ground-Based	0	~170
Naval	0	~700
Total Active	~500	~2000

Note:

* Some estimate larger Russian inventory; do those estimates include weapons that may be retired and awaiting dismantlement?

US NSNW Sites in Europe

- US believed to deploy ~200 B61 nuclear bombs in Europe
  - At six air bases in Italy, Belgium, Germany, Netherlands and Turkey
  - Deployed for use by US and allied air forces

US, NATO and NSNW

- May 2012 NATO summit released Deterrence and Defense Posture Review
  - Reaffirms NATO as nuclear alliance
  - NATO prepared to consider reducing NSNW if reciprocal steps by Russia
  - NATO call for transparency on NSNW
- President Obama on June 19 called for "bold" reductions in US and Russian NSNW

Key NSNW Arms Control Issues

- Reduce/limit warheads or delivery systems?
  - Delivery systems have conventional roles
- Seek to apply global or regional limits?
  - NSNW transportability argues for global
- Verification challenges

Possible Confidence-Building Measures

- Transparency regarding numbers, types, locations and status of NSNW
- Codify “demating” – separation – of warheads from delivery systems
- Relocate/consolidate NSNW to sites away from NATO-Russia border
  - Asian states want no NSNW relocation to Asia

Possible National Steps

- No-increase commitment by US, Russia
  - Limited practical and political effect
- Parallel unilateral reductions, e.g., US and Russia reduce their NSNW by 50%
  - 1991 parallel reductions eliminated thousands of nuclear weapons on each side

Negotiated Outcomes

- Negotiate limit applying to NSNW only
  - Difficult given large numerical disparity
- Negotiate single limit covering all strategic and non-strategic nuclear warheads
  - Could require long time to negotiate
- Phased approach
  - Transparency => CBMs => negotiated limits

Example of Single Limit

- Limit of 2000-2500 total nuclear warheads each for US and Russia
  - Sublimit of 1000 deployed strategic warheads
  - Sides free to choose mix of non-deployed strategic and non-strategic warheads
- Result = significant cuts on both sides
- But how long to negotiate?

Missile Defense (MD) Issues

Missile Defense

- Russians link further nuclear reductions to resolution of missile defense
  - Cite offense-defense interrelationship
- US acknowledges interrelationship but says its planned MD directed against rogue states (North Korea, Iran) and poses no threat to Russian strategic missiles

US Missile Defense in Europe

- US Navy ships with SM-3 missile defense interceptors now operate near Europe
  - Supporting radar deployed in Turkey
- Later phases to deploy SM-3s on shore in Romania, Poland

Phase 4 Cancellation

- Phase 4 of European missile defense plan cancelled in March
  - Goal was to give SM-3 capability in 2022 to engage ICBM warheads
- Cancellation eliminated phase of greatest concern to Russia
  - Creates opportunity to resolve missile defense differences?

NATO-Russia Cooperation

- NATO and Russia agreed in 2010 to explore missile defense cooperation
- Moscow seeks “legal guarantee” that US MD not directed against Russian missiles
  - US ready to provide political assurance
  - If sides can get past this impasse, views converge on many elements of cooperative missile defense system

Converging Ideas on Cooperation

- NATO and Russia would retain control of own interceptor launch decision
- Elements of cooperative missile defense:
  - Transparency
  - Joint NATO-Russia MD exercises
  - Jointly manned NATO-Russia data fusion center to share warning data and operations/ planning center to explore further integration

Future Prospects

New Negotiation Possible?

- Moscow's response to President Obama's call for further cuts cool, but door not shut
- Consultations ongoing in run-up to September Obama-Putin summit
  - US hopes summit will produce principles for missile defense resolution and further nuclear arms reduction negotiation

Acronyms

DDPR	Deterrence and Defense Posture Review
HB	(Nuclear-capable) Heavy Bomber
ICBM	Intercontinental Ballistic Missile
MD	Missile Defense
NATO	North Atlantic Treaty Organization
NSNW	Non-Strategic Nuclear Weapon
SDV	Strategic Delivery Vehicle
SLBM	Submarine-Launched Ballistic Missile
START	Strategic Arms Reduction Treaty

For Further Information

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Sources

Slide 9: Figures drawn from US Department of State website

Slide 10: March 2013 US-Russia New START data exchange

Slide 16: Federation of American Scientists, "Status of World Nuclear Powers Early-2013," http://www.fas.org/programs/ssp/nukes/nuclearweapons/nukestatus.html

Slide 20: Numbers drawn from Hans M. Kristensen, "Trimming Nuclear Excess: Options for Further Reductions of U.S. and Russian Nuclear Forces," Federation of American Scientists, December 2012

Slides 23 and 24: Drawn from Hans M. Kristensen, "Non-Strategic Nuclear Weapons," Federation of American Scientists Special Report No. 3, May 2012

Slide 26: Bottom photo from Hans M. Kristensen, FAS Strategic Security Blog, "Estimated Nuclear Weapons Locations 2009," November 25, 2009, http://www.fas.org/blog/ssp/2009/11/locations.php