Nuclear Arms Proliferation and Control

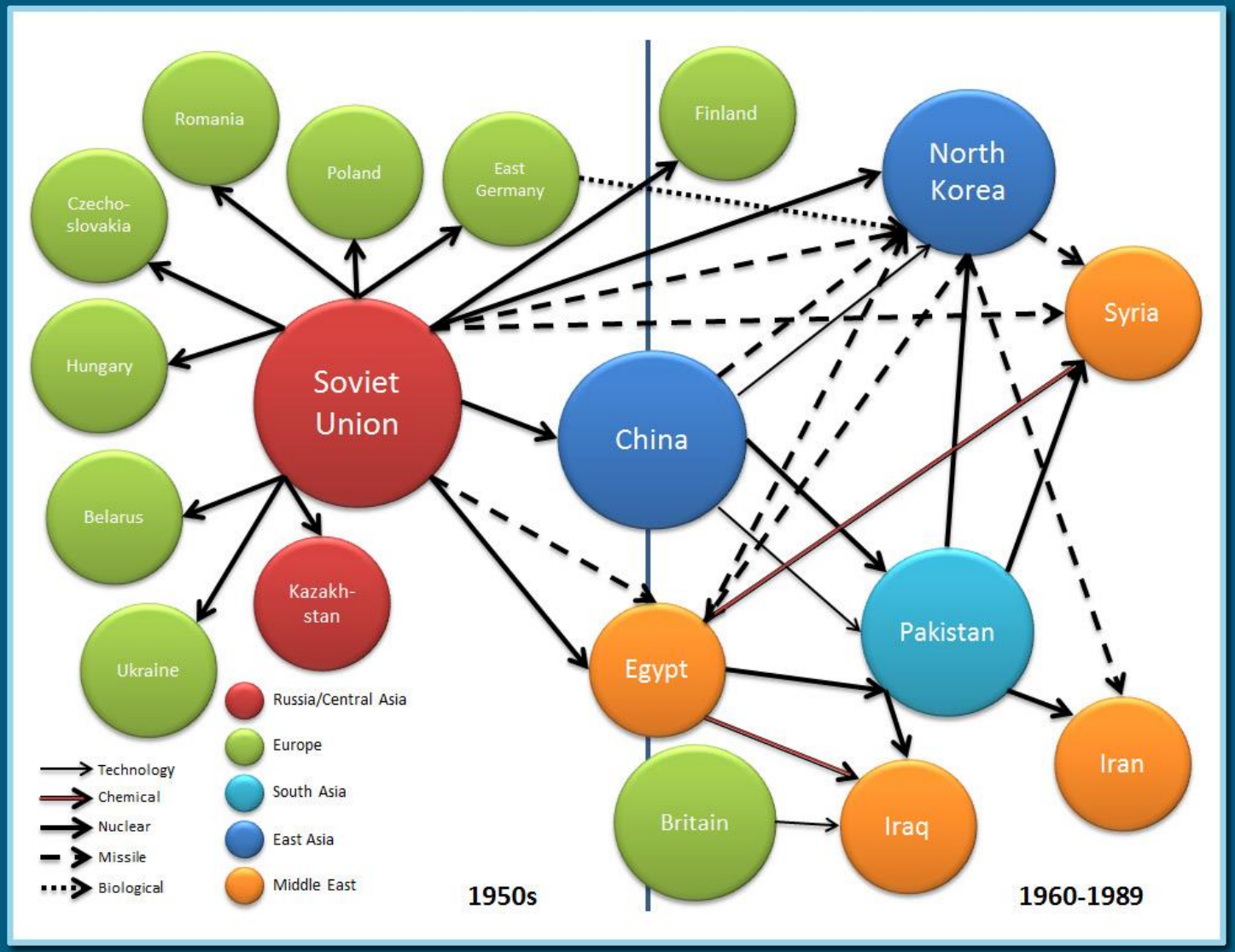
Nuclear Weapons Proliferation

- 1st Nuclear Age – 1945 – 1989
  - Vertical proliferation
- 2nd Nuclear Age – 1990 – present
  - Horizontal proliferation

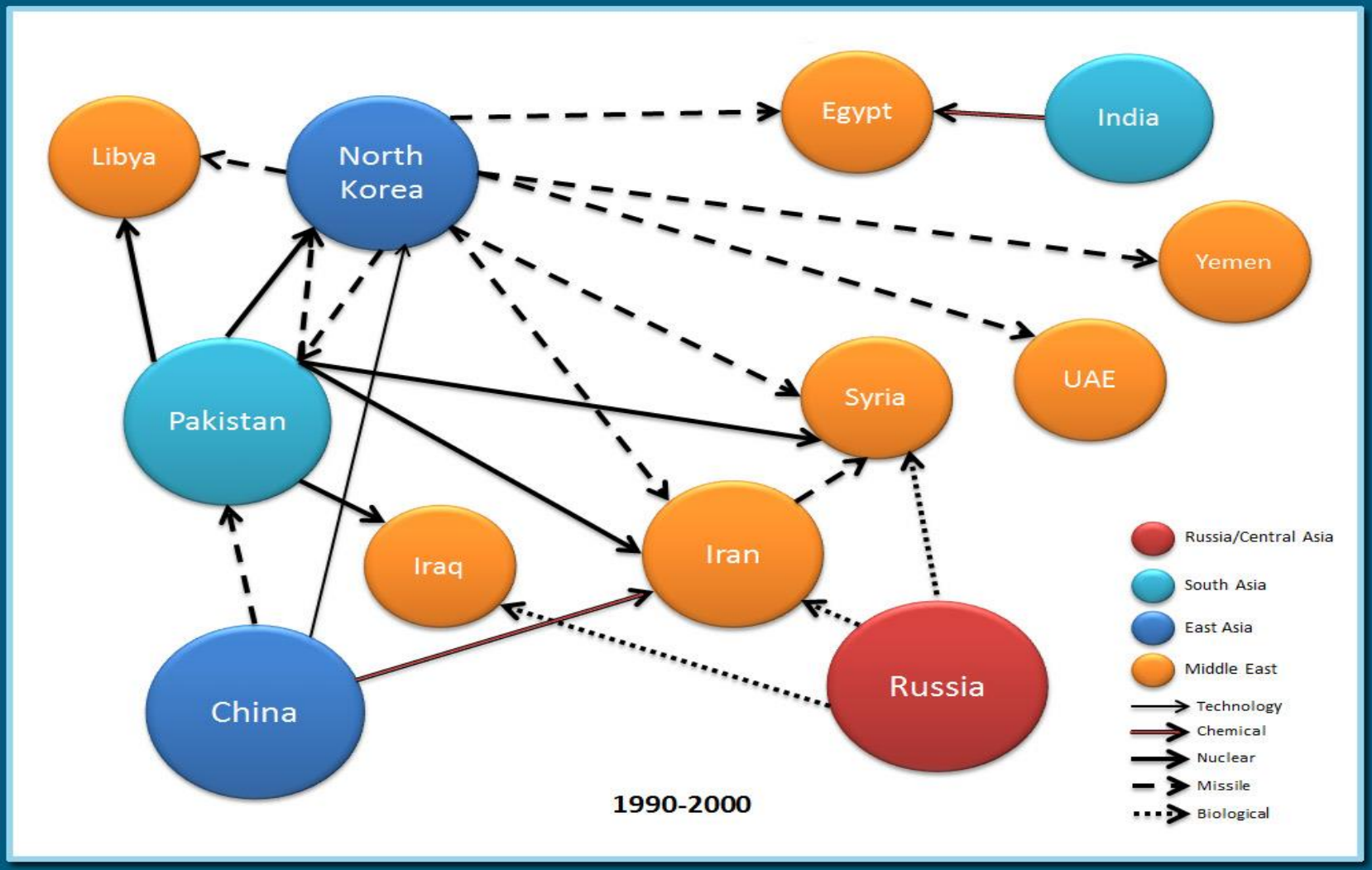
Motives for NW Proliferation

- USA 1945
- USSR 1949
  - Belarus
  - Ukraine
  - Kazakhstan
- Great Britain 1952
- France 1960
- China 1964
- Israel 1966
- India 1974
- South Africa 1979
- Pakistan 1998
- North Korea 2006

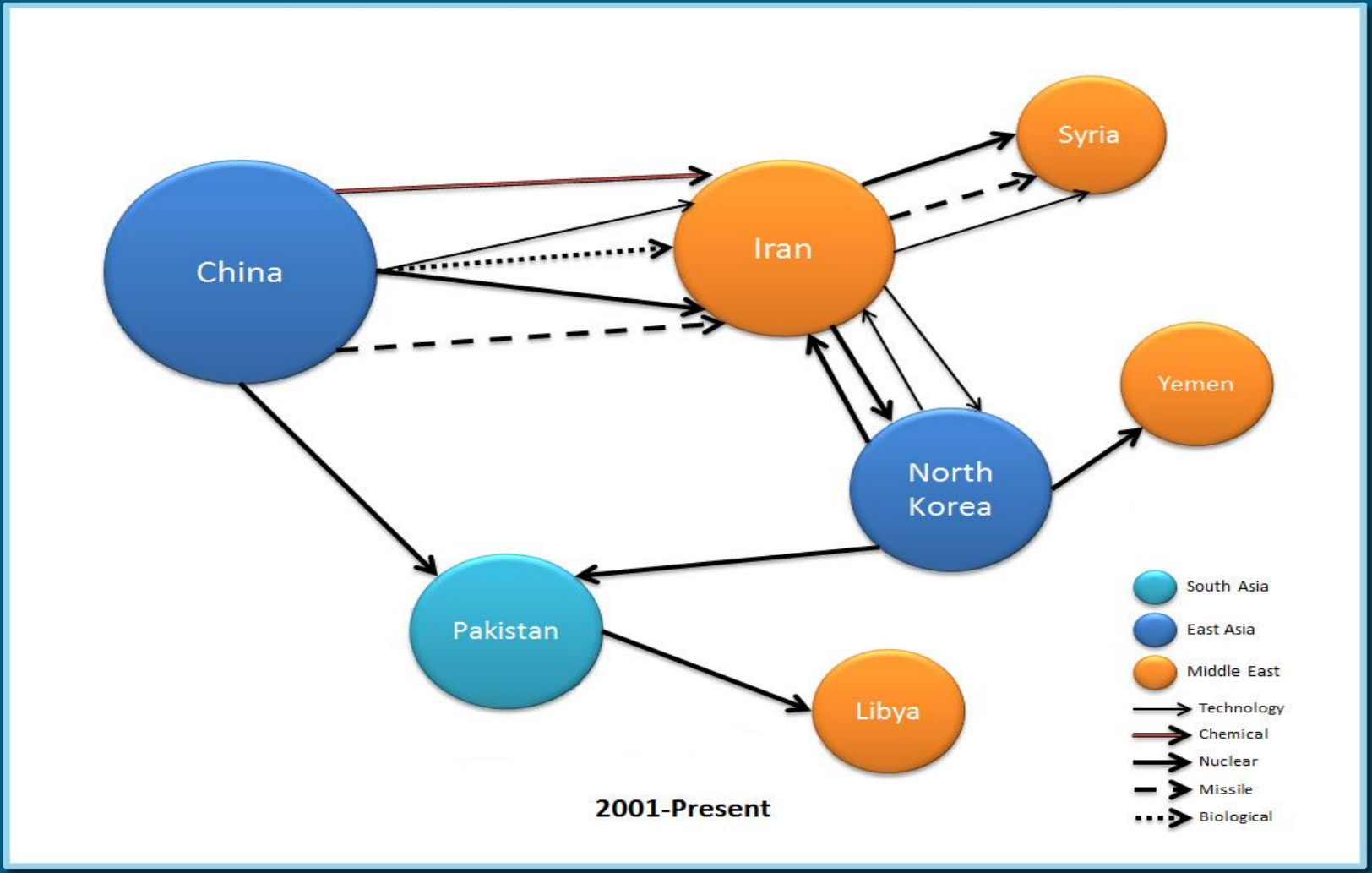
Major Patterns of WMD Proliferation 1950s, 1960-1989



Major Patterns of WMD Proliferation 1990-2000



Major Patterns of WMD Proliferation 2001-Present



Choksy, C. B. E. and Choksy, J. K. (2013). *WMD Proliferation Threatens the World.* (http://yaleglobal.yale.edu/content/wmd-proliferation-threatens-world)

Nuclear Stockpiles of the USA and USSR 1945-1989

	USA	USSR
1945	6	0
1950	369	5
1955	3057	200
1960	20 434	1605
1965	31 642	6129
1970	26 119	11 643
1975	27 052	19 055
1980	23 764	30 062
1985	23 135	39 197
1989	22 174	35 805

Arms Control

- „The excercise of restraint in the acquisition, deployment and use of military capabilities“
- „Measures that enable actors to conduct themselves in a more restrained way (through developing techniques of crisis management)“ (Evans, Nenham 1998:33)
- „All the forms of military cooperation between potential enemies in the interest of reducing the likelihood of war, its scope and violence if it occurs, and the political and economic costs of being prepared for it.“ (Schellin & Halperin 1985: 2)

Disarmament

- A process – reduction, removal, elimination of identified weapon systems
- A state – establishment of a disarmed world and the prevention of a rearmament thereafter

Structural & Operational Arms Control

- Structural – qualitative and quantitative aspects of weapons of a given class. The goal is to achieve or keep arsenals in balance and thus establish or keep parity and stability
- Operational – attempts to keep adversaries as restrained as possible when resort to arms is concerned. The aim is to prevent an outbreak or further escalation of a conflict

Croft's Typology

1. Arms control at the conclusion of major conflicts
2. Arms control to strengthen strategic stability
3. Arms control to create norms of behavior
4. Arms control managing proliferation of weapons
5. Arms control by international organization

Arms Control & Disarmament

- What arms control and disarmament treaties do you know?

Operational Arms Control

- The U.S. – the USSR Hot Line Agreement (1963)
- Limited Test Ban Treaty (LTBT – 1963)
- Nuclear Non-Proliferation Treaty (NPT – 1968)
- Threshold Test Ban Treaty (TTBT – 1974)
- Comprehensive test Ban Treaty (CTBT – 1996)
- Outer Space Treaty (1967)
- Seabed Treaty (1971)
- CSBMs

Structural Arms Control

- SALT I and ABM Treaty (1972)
- SALT II (1979)
- INF (1987)
- START I (1991)
- START II (1993)
- SORT (Moscow Treaty)
- New START (2010)

SALT I

	ICBMs	SLBMs	SSBNs with SLBMs
USA May 1972	1054	656	41
SALT I Limit	1054	710	44
SSSR May 1972	1618	740	56
SALT I Limit	1618	950	62

The INF Treaty

- Intermediate-Range Forces Treaty
- 1987 U.S.-Soviet Treaty
- Global withdrawal and elimination of U.S. and Soviet land based MRBMs (500-1000 km) and IRBMs (1,000-5,500 km)
- Very robust on-site inspection and verification measures for production and deployment

INF Treaty

- **USA**
- Pershing 2 - 234
- GLCM – 443
- Pershing IA - 169
- **Aggregate n. - 846**

- **USSR**
- SS-20 - 654
- SS-23 - 239
- SS-4 – 149
- SS-5 – 6
- SS-12 – 718
- SSC-X-4 - 80
- **Aggregate n. - 1846**

Central Problem: Russian Violation

- Russian test 2 Sept. 2015 was first launch of GLCM with potential INF range, 500-5,500km, and is a Treaty violation

- Test of a ground-launched cruise missile, the R-500, or SSC-X-8, this is a version of Kalibr used to attack targets in Syria

Multilateralization of the Treaty

It saves the INF Regime, Aids U.S., Russian, and Global Security

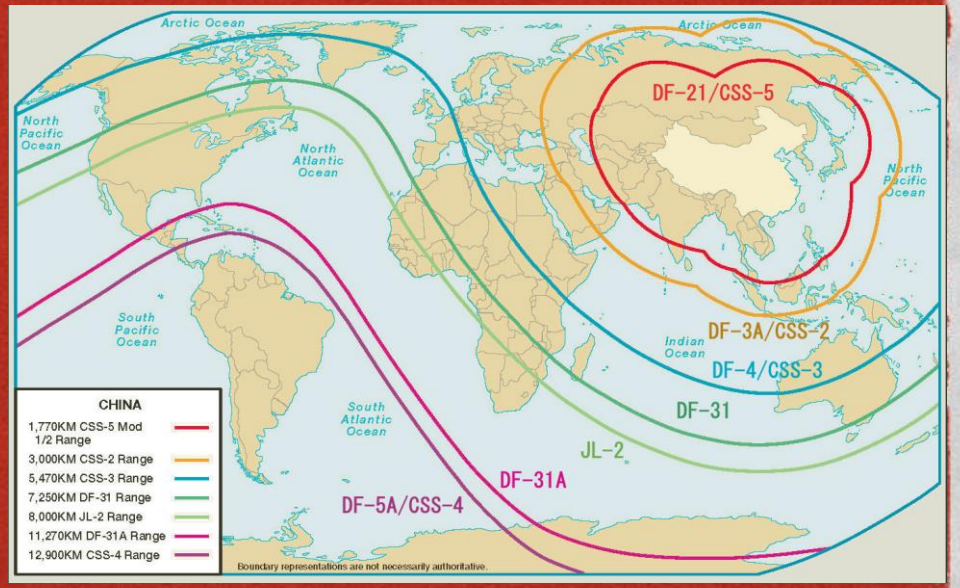
Who Should Join? China is the key actor due to Russian concerns

- China's accession to the Treaty would have a substantial stabilizing effect in the light of the proliferation of Chinese IRBMs and growing Russian concerns.
- Alexei Arbatov and Vladimir Dvorkin, Russian Arms Control Experts: "China must be taken into consideration when discussing subsequent U.S.-Russian initiatives on arms limitations and reductions."

- Were China to join, Russia would still have an incentive to remain within the Treaty, as IRBMs would remain banned

This is a Complex Problem

- One of the most challenging arms control negotiations
- Dangerous security situation in Asia
  - Particularly tension between China and Japan, and China and India
- To move forward, it is necessary for Russia and the United States to approach and engage China directly on this issue
  - This step would recognize Beijing's special status and importance as a growing force in international politics.
- Likely strong resistance such a proposal would meet from other regional players, such as India and Pakistan
- China has the diplomatic, economic, and military means to further its goals and ambitions without its land based IRBMs



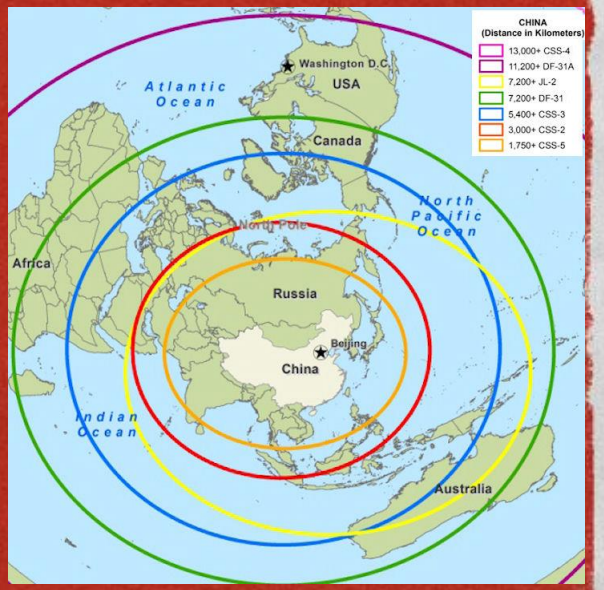
Why China should join the INF Treaty (2 of 3)

Benefits for Asia (reduces security dilemma)

- Given present tensions in Asia. New Delhi, Hanoi, Manila, and Tokyo are suspicious of China's possible territorial ambitions in the East and South China Seas, and along the Sino-Indian border
- There is a strong legacy of mistrust, and the possibility of arms races, crises, and intense security competition is significant

Benefits for China: It is a Status Quo Power Interested in Strategic Stability

- Beijing shows it accepts the value of arms control and seeks confidence-building measures
- Demonstrates that China is a status quo power in the Asia-Pacific
- Strengthens the ballistic missile non-proliferation regime



What China Will Gain

Russia is prevented from reintroduction of their land based INF systems in Asia

- The U.S. is prevented from potential deployment in East Asia and Pacific

As Moscow and Washington operate under the New START Treaty, China could have confidence that their strategic force will not increase

- Other states might be inspired to join the treaty

Strategic Weapons

Table 15.1 U.S. and Soviet Strategic Forces as of Mid-1991

	Soviet Union	United States
ICBMs	1,086	1,000
SLBMs	912	640
ICBM and SLBM warheads	10,352	7,890
Long range bombers	177	307
ALCMs	720	1,720
SLCMs	150	357
Total strategic warheads	11,309	10,102

START Treaties

- START I - Limit 1600 strategic carriers (ICBMs, SLBMs, strategic bombers)
- 6000 nuclear warheads
- START II - Limit 3500 warheads
- Ban on MIRVed ICBMs
- Ban on „heavy“ missiles

START Treaties

- SORT (2002)
- 1700-2200 warheads
- New START (2010)
- 1550 warheads
- 700 operational launchers

Current Nuclear Arsenals

- USA 2080 (7100)
- Russia 4500 (7500)
- France 300
- China (260)
- Great Britain (215)
- Pakistan (130)
- India (120)
- Israel (80)
- North Korea (15+)