Modern Arms Control and Disarmament

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Definitions
**Definitions**

**Arms control** – a set of measures aimed at cessation of arms buildup, their limitation, reduction and elimination as well as measures aimed at arms nonproliferation.

**Arms control** - the process of cooperation between states on the issues of restriction, reduction, nonproliferation, production of weapons, deployment and/or use of military forces.

**Disarmament** – efforts aimed at the increasing stability of international relations with decreasing the number of military forces and weapons by effective and verifiable agreements and confidence-building measures.

**Nuclear arms control** – a set of measures adopted on the basis of international treaties and oriented at cessation of buildup, limitation, reduction and elimination of nuclear armaments as well as prevention of proliferation of nuclear technologies and nuclear arms, strengthening of trust in nuclear sphere.
Arms Control Treaties Apply To:

- Conventional Weapons
- Weapons of Mass Destruction
  - Nuclear, biological, and chemical weapons
Definitions

- **ICBM** – an intercontinental ballistic missile – is a guided ballistic missile with a minimum range of 5,500 kilometres (3,400 mi) primarily designed for nuclear weapons delivery (delivering one or more thermonuclear warheads). Similarly, conventional, chemical, and biological weapons can also be delivered with varying effectiveness, but have never been deployed on ICBMs.

- **MIRV** – multiple independently targetable reentry vehicle – is a missile payload containing several warheads, each capable of being aimed to hit a different target. The concept is almost invariably associated with intercontinental ballistic missiles carrying thermonuclear warheads, even if not strictly being limited to them. By contrast, a unitary warhead is a single warhead on a single missile.

The MIRV U.S. Peacekeeper missile, with the reentry vehicles highlighted in red.
**Definitions**

- **SLBM** - submarine-launched ballistic missile – is a ballistic missile capable of being launched from submarines. Modern variants usually deliver multiple independently targetable reentry vehicles (MIRVs) each of which carries a nuclear warhead and allows a single launched missile to strike several targets. Submarine-launched ballistic missiles operate in a different way from submarine-launched cruise missiles.

- Modern submarine-launched ballistic missiles are closely related to intercontinental ballistic missiles, with ranges of over 5,500 kilometres (3,000 nmi), and in many cases SLBMs and ICBMs may be part of the same family of weapons.
U.S. Submarine-Launched Ballistic Missiles (SLBM)
Definitions

- **ALBM** – air-launched ballistic missile – is a ballistic missile launched from an aircraft. An ALBM allows the launch aircraft to stand off at long distances from its target, keeping it well outside the range of defensive weapons like anti-aircraft missiles and interceptor aircraft. Once launched, the missile is essentially immune to interception. This combination of features allowed a strategic bomber to present a credible deterrent second-strike option in an era when improving anti-aircraft defences appeared to be rendering conventional bombers obsolete.

Air Mobile Feasibility demonstration, 24 October 1974
Definitions

- **ALCM** – an air-launched cruise missile – is a cruise missile that is launched from a military aircraft. Current versions are typically standoff weapons which are used to attack predetermined land targets with conventional, nuclear or thermonuclear payloads.

An AGM-86 air-launched cruise missile in flight (1980)
**Definitions**

- **Tactical nuclear weapons or non-strategic nuclear weapon** typically refer to short-range weapons, including land-based missiles with a range of less than 500 km (about 300 miles) and air- and sea-launched weapons with a range of less than 600 km (about 400 miles). Historically, TNWs were intended for the use in battlefield and theatre-level operations in conjunction with conventional forces. These missions encourage their forward-basing and can make the decision to use TNWs psychologically and operationally easier.

- **UAV – Unmanned Aerial Vehicles** (or uncrewed aerial vehicle, commonly known as a drone) is an aircraft without a human pilot on board and a type of unmanned vehicle.

- **Conventional arms** – generally refer to weapons whose ability to damage comes from kinetic or incendiary, or explosive energy and exclude weapons of mass destruction (e.g. nuclear, biological, and chemical weapons).
Types of missiles:

- **Ballistic missiles**
  - Tactical ballistic missile
  - Short-range ballistic missile
  - Theatre ballistic missile
  - Medium-range ballistic missile
  - Intermediate-range ballistic missile
  - Intercontinental ballistic missile
  - Submarine-launched ballistic missile
  - Air-launched ballistic missile

- **Cruise missiles**
  - Air-launched cruise missile
  - Ground-launched cruise missile
  - Submarine-launched cruise missile

- **Land-attack missile**
  - Shoulder-launched missiles
  - Surface-to-air missile
  - Surface-to-surface missile
  - Wire-guided missile

- **Conventional guided missiles**
  - Air-to-air missile
  - Air-to-surface missile
  - Anti-radiation missile
  - Anti-ballistic missile
  - Anti-satellite weapon
  - Anti-ship missile
  - Anti-submarine missile
  - Anti-tank guided missile
Arms Control Treaties
Arms Control and Non-Proliferation Treaties and Conventions (Part I)

Treaties on nuclear weapons:

- Partial Test Ban Treaty, signed and entered into force 1963
- Outer Space Treaty, signed and entered into force 1967
- Nuclear Non-Proliferation Treaty, signed 1968, entered into force 1970
- Seabed Arms Control Treaty, signed 1971, entered into force 1972
- Strategic Arms Limitation Treaty (SALT I), signed and ratified 1972, in force 1972-1977
- Anti-Ballistic Missile Treaty, signed and entered into force 1972, terminated following U.S. withdrawal 2002
- Threshold Test Ban Treaty, signed 1974, entered into force 1990
- SALT II signed 1979, never entered into force
Treaties on nuclear weapons (Cont’d):

- START II, signed 1993, ratified 1996 (United States) and 2000 (Russia), terminated following Russian withdrawal 2002
- Comprehensive Nuclear-Test-Ban Treaty, signed 1996, has not entered into force.
- International Code of Conduct against Ballistic Missile Proliferation, signed 2002
- New START Treaty, signed by Russia and the United States April 2010, entered into force February 2011
Arms Control Treaties and Conventions (Part III)

*Treaties on chemical and biological weapons:*
- Geneva Protocol on chemical and biological weapons, 1925
- Biological Weapons Convention, signed 1972, entered into force 1975
- Chemical Weapons Convention, signed 1993, entered into force 1997

*Treaties on conventional weapons:*
- Washington Naval Treaty, 1922-1939 (as part of the naval conferences)
- Environmental Modification Convention, signed 1977, entered into force 1978
- Ottawa Treaty on anti-personnel landmines, signed 1997, entered into force 1999
- Convention on Cluster Munitions, signed 2008, entered into force 2010
- Open Skies Treaty, signed 1992, entered into force 2002
Nuclear Weapon-Free Zone Treaties:
- Treaty of Tlatelolco (Latin America and the Caribbean), signed 1967, entered into force 1972
- Treaty of Rarotonga (South Pacific), signed 1985, entered into force 1986
- Treaty of Bangkok (Southeast Asia), signed 1995, entered into force 1997
- Treaty of Semipalatinsk (Central Asia), signed 2006, entered into force 2008

Other treaties also envision the creation of NWFZ, among other objectives. These are the following:
- Antarctic Treaty, signed 1959, entered into force 1961
- Outer Space Treaty, signed and entered into force 1967
- Seabed Arms Control Treaty, signed 1971, entered into force 1972
- Moon Treaty, signed 1979, entered into force 1984
# Strategic Nuclear Arms Control Agreements

## Treaties At A Glance: Limits

<table>
<thead>
<tr>
<th>Status</th>
<th>SALT I</th>
<th>SALT II</th>
<th>INF Treaty</th>
<th>START I</th>
<th>START II</th>
<th>START III</th>
<th>SORT</th>
<th>New START</th>
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<tbody>
<tr>
<td>Deployed Warhead Limit</td>
<td>Expired</td>
<td>6,000</td>
<td>N/A</td>
<td>N/A</td>
<td>2,250</td>
<td>N/A</td>
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<tr>
<td>Deployed Delivery Vehicle Limit</td>
<td>US: 1,710 ICBMs &amp; SLBMs USSR: 2,347</td>
<td>Prohibits ground-based missiles of 500-5,500 km range</td>
<td>N/A</td>
<td>1,600</td>
<td>N/A</td>
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<td>N/A</td>
<td>700</td>
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<td>Ratification Vote, U.S.</td>
<td>88-2</td>
<td>N/A</td>
<td>93-6</td>
<td>93-5</td>
<td>87-4</td>
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<td>95-0</td>
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<td>Date Entered Into Force</td>
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<td>June 1, 1988</td>
<td>Dec. 5, 1994</td>
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<td>Implementation Deadline</td>
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<td>June 1, 1991</td>
<td>Dec. 5, 2001</td>
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<td>Expiration Date</td>
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<td>Dec. 5, 2009</td>
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<td>N/A</td>
<td>Feb. 5, 2011</td>
<td>Feb. 5, 2021*</td>
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Resource: Arms Control Association

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[Evgeny Buzhinskiy](http://www.pircenter.org/)

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UN vote on adoption of the Treaty on the Prohibition of Nuclear Weapons on 7 July 2017  Blue – Yes

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