

Disarmament treaties

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The nuclear Non-Proliferation Treaty (NPT)

Widespread international concerns about the spiralling numbers of nuclear weapons and the danger of their proliferation led to the Treaty on the Non-Proliferation of Nuclear Weapons or nuclear Non-Proliferation Treaty (NPT) being signed in 1968 and coming into force in 1970. Five states: the UK, France, the Soviet Union (now Soviet Union), China, and the US had already acquired nuclear weapons by this time and these nuclear weapon states agreed to negotiate disarmament in exchange for those states without nuclear weapons not acquiring them so that any further proliferation would be halted. Article VI of the NPT especially relates to disarmament:

'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.'

Additionally, in Article IV the treaty identifies the right of all signatories to develop and use civil nuclear power.

Nearly all states in the world have joined up to the NPT. However Israel, India and Pakistan have not signed or ratified the treaty, are therefore not bound by its obligations and have since developed their own nuclear weapons arsenals. These states have been called on to join the NPT but they can only do so as non-nuclear weapon states and so would be required to give up their nuclear weapons first. North Korea withdrew from the treaty in 2003 and has since tested nuclear devices underground but is not yet thought to have a full nuclear weapons capability.

Bilateral treaties between the United States of America (US) and Russia

START I

The Strategic Arms Reduction Treaty (START) was signed between the US and Soviet Union in

July 1991. After the Soviet Union broke up, the 'Lisbon Protocol' was signed to include the Ukraine, Kazakhstan, and Belarus in this treaty. Soviet Union nuclear weapons had been based in these three countries and they were then either scrapped or sent to Russia.

In summary, START I limited the number of heavy bombers (the large aircraft able to carry heavier bombs including nuclear ones), intercontinental ballistic missiles (ICBMs), and submarine launched ballistic missiles (SLBMs), to 1,600 in total. These delivery systems were then limited to deploying no more than 6,000 nuclear warheads in all. The treaty limited the numbers of warheads deployed so this meant that the same number as before could be kept but held in reserve or stockpiled instead of being deployed. The treaty expired in December 2009.

START II and III – never entered into force
Signed in 1993 between the US and Russia, the START II treaty aimed to decrease the numbers of warheads even further by the end of 2007, and ban the use of ICBMs with MIRV capability (able to carry more than one warhead with each warhead being able to reach a separate target). A framework for a START III treaty was agreed between the two countries in 1997. It proposed a limit of 2,000-2,500 warheads for each. Significantly it also proposed destruction of the excess warheads and suggestions for cuts in tactical weapons.

START II did not enter into force after Russia withdrew from the treaty in response to the US's withdrawal from the Anti-Ballistic Missile Treaty in 2002. This withdrawal also meant that START III negotiations were never held and the SORT treaty superseded it.

New START treaty

A new START treaty officially called Measures to Further Reduction and Limitation of Strategic Offensive Arms was signed by the US and Russia in April 2010. It now needs to be ratified by the Russian Parliament and US Congress. It has been heralded as an important advance in nuclear

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disarmament. This new treaty aims to limit the number of deployed and non-deployed ICBM launchers, SLBM launchers, and heavy bombers equipped for nuclear armaments to 800 (with a further limit of 700 for those deployed) and to cut the deployed strategic warheads allowed to be carried by these to 1,550. It has a verification mechanism but it does not specify that excess warheads and delivery vehicles be dismantled and so does not address each country's substantial stockpile of weapons. Additionally, the treaty may misrepresent the number of active warheads as it counts each heavy bomber as one warhead even though both the US and Russia's bombers deploy multiple warheads, some based on cruise missiles. Overall, this means that there could be around 2,000 warheads strategically deployed but there will still be said to be 1,550.

The issue of missile defence capabilities has been a bone of contention in negotiations for this treaty, just as it was with the previous bilateral treaties.

Strategic Offensive Reductions Treaty (SORT)

The Strategic Offensive Reductions Treaty (SORT) or Moscow Treaty entered into force in June 2003 to limit the numbers of operationally deployed nuclear warheads by the US and Russia to 1,700-2,200 apiece. This treaty has been criticised because it does not include any verification measures to prove such reductions, does not define exactly what 'operational' means and does not require surplus warheads to be scrapped, only stored so that it is possible to re-deploy them in the future. The treaty is to expire when the new START treaty enters into force.

The Anti-Ballistic Missile Treaty (ABM Treaty)

The ABM Treaty came into force in 1972. Its aim was to curb an arms race (including nuclear weapons) since it restricted the two sides' defensive capabilities so that each side would be deterred from building new or advanced weapons to overcome advancements in the other's anti-ballistic missile defensive systems (using missiles to knock out incoming missiles). The agreement bound the countries to possessing only two anti-ballistic missile installations each and forbade the development of a nation-wide missile defence system. The US withdrew from the treaty in 2002 to allow it to further develop its missile defence systems.

The Intermediate-Range Nuclear Forces Treaty (INF)

The INF treaty, as it became known, was signed in 1987 by the Soviet Union and US and entered into force in June 1988. The treaty agreed elimination of each side's ground-launched ballistic and cruise missiles with a range of between 500-5,000 km. It also allowed for verification of the reductions.

The treaty related to nuclear-armed missiles being deployed tactically by both sides and aimed at European targets. The

treaty's purpose was to halt a nuclear arms race between the two sides after the US deployed nuclear armed Pershing II and cruise missiles at bases across Europe on behalf of NATO, in response to Russia's deployment of more advanced SS-20 ballistic missiles. There was widespread public protest against US nuclear weapons being deployed at European bases. In the UK the RAF base at Greenham Common, Berkshire became the site of a women's peace camp for 19 years until the weapons and eventually the base itself were removed.

The Soviet Union had destroyed 1,846 weapons and the US had destroyed 846 weapons by the treaty's deadline in 1991. The treaty continues to ban the possession of such weapons by either side and since the break up of the Soviet Union, Ukraine, Belarus, Kazakhstan have also been included in the agreement.

Nuclear weapons testing

Partial Test Ban Treaty (PTBT)

Amid growing concerns about the environmental and health impacts caused by the radioactive fallout from extensive nuclear weapons testing programmes in the 1950s, this treaty entered into force in October 1963. The PTBT bans nuclear weapons testing under water, in the atmosphere and in outer space. France, China and North Korea have not signed the treaty. After the PTBT came into force further atmospheric nuclear weapons testing was carried out by France in 1974 and China in 1980.

The Threshold Test Ban Treaty (TTBT) and the Peaceful Nuclear Explosion Treaty (PNET)

The TTBT and PNET are two bilateral treaties negotiated concurrently between the US and former Soviet Union which capped the explosive power at 150 kilotons for both military test purposes (TTBT) and civil test purposes (PNET) for example for mining/quarrying or creating dams. The TTBT was signed in 1974 and the PNET was signed in 1976; both treaties finally entered into force in December 1990.

Comprehensive Test Ban Treaty (CTBT) – not yet entered into force

The Partial Test Ban Treaty does not ban underground nuclear weapons testing and so the nuclear weapon states continued developing and improving their warheads by this means. This kind of underground testing still meant environmental damage and contamination, however, with every test creating highly radioactive underground caverns and much radioactive gas and dust which could escape into the air.

In 1992 as a move towards banning nuclear weapons testing universally, the US, France and Russia announced a moratorium, a temporary end to testing. Britain, which had

used the US Nevada site for many years, joined in. From this the CTBT was eventually negotiated and opened for signatures in 1996. As the CTBTO Preparatory Commission explains 'The CTBT created a de facto international norm against nuclear testing and extended the existing moratorium.'¹

Although it has been signed and ratified by most states in the world, to enter into force it still needs to be ratified by all 44 of the states identified as having nuclear power or research reactors (and thus the potential capability to produce nuclear weapons). Of these states, Pakistan, North Korea and India have not yet signed the CTBT. Other states, the United States, China, Egypt, Indonesia, Iran and Israel have signed but not ratified the treaty.

As long as the CTBT does not enter into force and so is not legally binding, there is always the chance that nuclear weapons testing will be resumed by the nuclear weapon states to further advance their arsenals. Moreover, without such a treaty other non-nuclear weapon states have the possibility to carry out such tests with a view to developing a nuclear weapons capability. North Korea, for instance, has carried out two underground tests of a nuclear device, one in 2006 and one in 2009. Some argue that the nuclear weapon states may be developing advanced technological means to carry out testing of their weapons without resorting to actual explosions, so such a ban would further increase the sense of nuclear haves and have-nots.

Space-related

Outer Space Treaty

This multilateral agreement entered into force in 1967 and bans the siting of weapons of mass destruction in space. In particular, nuclear and other weapons of mass destruction may not orbit the Earth, be installed on the Moon or other celestial bodies.

Nuclear Weapons Free Zones

There are five large areas in the world that have been designated nuclear weapons free zones under special treaties. The Treaty of Semipalatinsk covers Central Asia, and the whole of the Southern hemisphere has been agreed a nuclear weapons free zone by the Treaty of Tlatelolco covering Latin America and the Caribbean, the Treaty of Rarotonga covering the South Pacific, the Treaty of Bangkok covering Southeast Asia, and the Treaty of Pelindaba covering Africa.

Countries within these zones agree not to develop, test or possess nuclear weapons. The treaties include negative security assurances via protocols binding the officially recognised nuclear weapon states (UK, France, Russia, US and China) to agree not to threaten or use nuclear weapons against those within the zones. However, so far

only the protocol for the Latin America and Caribbean zone has been signed and ratified by all of the nuclear weapon states and none of the states have committed to negative security assurances for the Central Asia or Southeast Asia zones.

Mongolia and Austria are also nuclear weapons free areas, but not via any specific treaty, rather through national legislation.

Antarctica Treaty

In June 1961 the Antarctica Treaty established the use of this continent as only for peaceful purposes and it must be free from nuclear weapons deployment and testing.

Seabed Treaty

The Seabed Treaty entered into force in May 1972 with the purpose of forbidding the siting of nuclear weapons and other weapons of mass destruction on the seabed or ocean floor over 12 miles away from any coast.

Future Treaties

Nuclear Weapons Convention

There is extensive support worldwide for the negotiation of a Nuclear Weapons Convention which would ban all nuclear weapons just as other weapons of mass destruction have already been banned. Such a treaty would provide the concrete framework to enact the requirement of the NPT that nuclear weapon states disarm. In 1997 a draft model treaty was submitted by Costa Rica to the United Nations for discussion. The model treaty gives practical detail on issues such as verification and inspection. It also forbids the production of weapons usable fissile material and requires that nuclear weapons delivery platforms are either destroyed or made non-nuclear capable. Those states with nuclear weapons would be obligated to disarm in a series of five phases:

1. take nuclear weapons off alert
2. remove weapons from deployment
3. remove nuclear warheads from their delivery vehicles
4. disable the warheads, removing and disfiguring the 'pits'
5. place the fissile material under international control.

Fissile Material Cut-off Treaty (Fissban or FMCT)

This treaty would ban the production of those fissile materials (chiefly weapons grade uranium and plutonium) that form the key ingredients of nuclear weapons or other nuclear explosive devices. In 1993 the UN General Assembly adopted a resolution calling for the negotiation of such a treaty. However, issues regarding verification and the substantial stockpiles of such materials held by several of the nuclear weapon states have led to negotiations stalling.

In 2006 a draft treaty was submitted by the US to the Conference on Disarmament. However critics felt there were a number of omissions including the absence of any provision for a verification mechanism. In September 2009 an alternative draft dealing with the question of verification and existing stockpiles (prepared by The International Panel on Fissile Materials) was presented at the Conference on Disarmament by Japan, Canada and the Netherlands. The introduction to this draft treaty considers that 'A treaty

banning the production of fissile materials for nuclear weapons is essential to constraining nuclear arms races and to achieving the goal of nuclear disarmament'².

Sources

For more detailed information about all of these treaties the Treaties and Agreements section of the Arms Control Association's website is a useful resource at www.armscontrol.org/treaties

¹ www.ctbto.org/faqs/?uid=93&cHash=1007622614

² www.fissilematerials.org/ipfm/site_down/fmct-ipfm-sep2009.pdf