



WEAPONS OF MASS DESTRUCTION

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WMD - DEFINITION

- **WMD** - is a nuclear, radiological, chemical, biological or other weapon that can kill and bring significant harm to a large number of humans or cause great damage to human-made structures (e.g. buildings), natural structures (e.g. mountains), or the biosphere.
- It is used for inflicting **massive** destruction and casualties at a **large space**
- WMD have significant and long-term side effects (e.g. Hiroshima)
- Some activities (e.g. terrorist attack at the nuclear power plant, or a “dirty bomb” explosion) may have **similar impact** to the WMD

WMD - TYPES

- **Normal** - CBR (chemical, biological, radiological) or NBC (nuclear, biological, chemical)
- **Sometimes** - missile technologies and delivery systems
- **New** - electromagnetic weapons
- **High probability** – high-precision weapons, lasers, robots (cyber-humans), cyber attacks against critical infrastructure
- **Low probability** – genetic, tectonic, climate

KEY TREATIES AND REGULATIONS

- **PTBT** (Partial Test-Ban Treaty) - 1963
- **Outer Space** Treaty – 1967
- **NPT** (Nuclear Non-Proliferation Treaty) – 1968-1970
- **BWC** (Biological Weapons Convention) -1972-1975
- **CWC** (Chemical Weapons Convention) – 1993-1997
- **CTBT** (Comprehensive Test-Ban Treaty) – 1996

Also -

- Seabed Arms Control Treaty
- Convention on the Prohibition of Military or Any Hostile Use of Environmental Modification Techniques

PTBT

- Initiated by the Soviet Union, the United States and the United Kingdom
- Concerns about the nuclear fallout and other effects of the test explosions (hydrogen bomb, Bikini Atoll, etc.)
- Need to control the progress of nuclear weapons and have security guarantees for mutually assured destruction (MAD)
- Only underground tests were allowed
- Monitoring of implementation and verification mechanisms

OUTER SPACE TREATY

- Basic legal framework for the international space law
- Initiated by the USA, the UK, and the USSR
- Bars from **placing WMD** in orbit of Earth, installing them on the Moon or any other celestial body, or otherwise stationing them in outer space
- Only **peaceful use** of the Moon and other celestial bodies, cannot be occupied and **no sovereignty**
- **No tests** of weapons of any kind, maneuvers or bases and fortifications
- Exploration of space is **free** for all countries and should be to the benefit of all countries
- **BUT:** conventional arms are not prohibited – a threat of arms race in outer space

NPT

- Pillars:
 - **Nonproliferation** (to prevent the spread of nuclear weapons and weapons technology)
 - **Disarmament** (to further the goal of achieving nuclear disarmament and general and complete disarmament)
 - **Peaceful uses** of nuclear energy (to promote cooperation in the peaceful uses of nuclear energy)
- NPT Review Conferences – every 5 years
- Indefinite duration of the treaty

NWS

- Nuclear-weapon states (**NWS**) – China, France, Russia, the UK, the USA (*permanent members of the UN Security Council, P-5*)
- **Unofficial** NWS – India and Pakistan (*nuclear tests in 1998*), Israel (*opacity policy*), North Korea (*the first country that officially left the NPT*)
- States that **abandoned** the NWS status – South Africa, Belarus, Ukraine, Kazakhstan, Libya

NPT KEY PROVISIONS

- **Key compromise** - non-nuclear-weapon states (NNWS) agree never to acquire nuclear weapons and NWS in exchange agree to share the benefits of peaceful nuclear technology and to pursue nuclear disarmament aimed at the ultimate elimination of their nuclear arsenals
- NWS agree not to transfer nuclear weapons or other nuclear explosive devices and not in any way to assist, encourage, or induce a NNWS to acquire nuclear weapons
- NWS provide security guarantees not fixed in the NPT (declaration of no-use against NNWS unless there is a nuclear attack)

PROBLEMS

- NPT is allegedly **discriminatory** – have and have-nots
- **Easy withdrawal** from the NPT upon the will of the State Party (North Korea and no serious consequences for her)
- Nuclear weapons as **an assurance against attack** (if you have them, the risk of direct military attack is lower, deterrence mechanism)
- **Unofficial NWS** do not comply legally with the provisions of the treaty (Pakistan sharing the technology)
- **Nuclear-sharing** agreements (US nuclear bombs deployed and stored in Europe)

DISARMAMENT

- Vague obligation – **no deadline**
 - Parties agree 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
- Slow progress towards **Nuclear Zero** and Nuclear-Weapon-Free zones (NWFZ)
- The US and Russia reduced sharply in comparison with the peak of the Cold War (the 1970-1980s), others – wait.
- US-Russian **arms limitation and reduction treaties** – SALT, START, SORT, ABM Treaty, unilateral commitments on tactical NW
- More **political** than military importance of nuclear weapons

PEACEFUL USES

- Sovereign right for peaceful uses of nuclear energy
- Restrictions and impediments to make it difficult to transfer the peaceful program into a weapon program
- IAEA safeguards – reporting and inspections
- Nuclear Suppliers Group (NSG) – standards in trade
- **Problems:**
 - Uranium enrichment and plutonium reprocessing capabilities – dual-use and non-compliance
 - FMCT (Fissile material cut-off treaty) negotiations
 - 35-40 countries have knowledge to develop nuclear weapons

CTBT

- Bans **all nuclear test** explosions
- **Cannot enter into force** – not ratified by all 44 states that have nuclear power reactors or research reactors
 - India, Pakistan, North Korea – not even signed
 - China, Egypt, Iran, Israel, US – signed but not ratified
- **CTBTO** – organization to prepare the entry into force and further verification, including onsite inspections (*a network of monitoring centers, data center, etc.*)

BWC

- Extension of the 1925 Geneva Protocol (*ban on the use of BW*)
- The first multilateral treaty banning the production of an entire category of weapons
- Prohibits possession, development and stockpiling of biological agents and toxins
- Permitted purposes - prophylactic, protective and other peaceful purposes
- No verification mechanism

CWC

- Outlaws production, stockpiling and use of chemical weapons
- Provides for the destruction of existing CW arsenals with the specific schedule and deadlines – 90% already destroyed by 2015
- OPCW for verification – monitors the implementation of the destruction process

SMALL ARMS AND LIGHT WEAPONS (SALW)

- Not WMD – conventional weapons with high proliferation and low restrictions
- Firearms (machine-guns, rifles, etc.) and light weapons (grenade launchers, rocket launchers, landmines, rocket-propelled and hand grenades, etc.)
- Arms Trade Treaty (ATT) – bottom-up initiative (from NGOs to governments) entered into force in 2014
 - No supplies to arms-embargoed states, to countries with human rights abuses, and terrorism
 - Standards in export and import controls, check the destination and end users