

<u>StarMUN 2025, GA1:</u> <u>Research Report on the issue of the</u> <u>humanitarian consequences of nuclear</u> <u>weapons</u>

Introduction

On 6 August 1945 the United States Military detonated an atomic bomb over the Japanese city of Hiroshima. Three days later on 9 August 1945 the second and last atomic bomb used in armed conflict detonated over the city of Nagasaki.

It is estimated that the aerial bombings killed between 150,000 and 246,000 people.

These detonations showed the world, the dangerous power of nuclear weapons and their impact. In the cold war, following the second world war, many countries developped their own nuclear weapon porgrammes.



Non-proliferation

In 1968 the *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT) was negotiated. The Treaty is the global basis of non-proliferation and was signed by almost all countries except of Israel, South Sudan, India and Pakistan. North Korea withdrew its ratification of the treaty.

It Treaty states that countries are not allowed to build or assist others in building nuclear weapons. It further calls for disarmament and stresses the right to use nuclear energy for peaceful purposes.

In 2017 the general assembly passed the resolution leading to the *Treaty on the Prohibition of Nuclear Weapons*. This Treaty goes even further than the NPT, demanding a complete and irreversible destruction of nuclear weapons from nuclear powers and prohibiting the stationing of any nuclear weapon. The treaty further demands 'positive obligations' on affected states to assist victims of nuclear weapons use and testing and to remediate contaminated environments.

Testing of Nuclear Weapons

Tests of nuclear weapons can be divided into four categories.

- 1. **Atmospheric tests** are considered to be one of the most dangerous forms of tests due to the possibility of generating large nuclear fallout. Such tests are conducted close to the ground (e.g. on towers, balloons) or on the ground under the open atmosphere.
- 2. **Underground tests** are conducted beneath the surface. Unlike atmospheric tests underground tests do not create a mushroom cloud. Instead, they cause seismic activity and



a crater. Such tests have the potential to "vent" to the surface and therefore leak radioactive material to the surface.

- 3. **Exoatmospheric tests** are conducted above the atmosphere. Test devices are lifted onto rockets and launched into space.
- 4. **Underwater tests** are conducted underwater. The purpose of such tests was to evaluate the effects against naval vessels or potential sea-based nuclear weapons. Such detonations have led to contaminated water and other long-lasting effects on the ecosystems.

Humanitarian Consequences

Even a "limited" war between India or Pakistan could eradicate up to a third of the world's population, studies suggest.

Nuclear Famine

Consequences of a nuclear war would be huge amounts of soot being shot into the atmosphere. Other consequences are increases in cancer, sunburns and other UV – light related issues due to the ozone layer possibly being destroyed entirely. This could lead to periods of extreme cooling resulting in a global famine. The global temperature is estimated to drop as much as 1,3 °C. Some models even suggest that the global temperature could drop as much as 6,5 °C. Such a drop in temperature could lead to conditions similar to the last ice age on earth.

Radiation, burns and physical effects

The physical effects of nuclear weapons include a heat (thermal) wave, a blast wave, an electromagnetic pulse, the release of ionizing radiation, and the production of radioactive isotopes in fallout.

The direct effect of radiation on the human body leads to often deadly diseases and can have a genetic and intergenerational effect. Once contaminated with radioactive debris, areas can't be used in any form for decades or even centuries.

The consequences of a single nuclear explosion are horrific. Temperatures of several thousand degrees as well as overpressure and firestorms lead to thousands of deaths.

Relevant Treaties, UN Resolutions and Actions:

- Treaty on the Non-Proliferation of Nuclear Weapons
- Treaty on the Prohibition of Nuclear Weapons
- Partial Nuclear Test Ban Treaty
- Resolution: Humanitarian consequences of nuclear weapons

Useful Links and Sources:

Resolution: Humanitarian consequences of nuclear weapons (2023):

https://docs.un.org/en/A/C.1/78/L.23 (Resolution), https://digitallibrary.un.org/record/4028559?ln=en&v=pdf (Voting Record, p. 26, A/C.1/78/L.23), https://digitallibrary.un.org/record/4070098?ln=en&v=pdf (Meeting record)

Treaty on the Prohibition of Nuclear Weapons:

https://docs.un.org/en/A/CONF.229/2017/8 (Treaty Text)

https://disarmament.unoda.org/wmd/nuclear/tpnw/ (further explanation)

https://treaties.unoda.org/t/tpnw/participants (Status)

https://onlinelibrary.wiley.com/doi/full/10.1111/1758-5899.12892 (Essay on Humanitarian Consequences but also on nuclear weapons)

https://www.ippnw.org/wp-content/uploads/2022/08/Nuclear-Famine-2022.pdf (Humanitarian Consequences of "limited" nuclear war)

https://en.wikipedia.org/wiki/Treaty on the Prohibition of Nuclear Weapons

https://www.ippnw.org/programs/nuclear-weapons-abolition/the-humanitarian-impact-of-nuclear-weapons

https://en.wikipedia.org/wiki/Atomic bombings of Hiroshima and Nagasaki

https://www.icrc.org/en/statement/humanitarian-impacts-nuclear-weapons-are-beyondcapacity-any-humanitarian-organization-to-address-effectively

https://en.wikipedia.org/wiki/Treaty on the Non-Proliferation of Nuclear Weapons

https://en.wikipedia.org/wiki/Nuclear weapons testing#Types

https://www.atlasobscura.com/articles/70-years-ago-the-us-military-set-off-a-nukeunderwater-and-it-went-very-badly

https://en.wikipedia.org/wiki/Partial Nuclear Test Ban Treaty

https://www.bmeia.gv.at/fileadmin/user_upload/Zentrale/Aussenpolitik/Abruestung/Understa nding_the_Humanitarian_Consequences_and_Risks_of_Nuclear_Weapons.pdf