

BIGMUN 2018
Disarmament and International Security (DISEC)

Research Report

Topic 1: The question of permanently minimising the risk of global nuclear war by 2050



Ronas T. Kesmez and Maria H. Katz

Introduction

With the rise of tension between the United States of America and North Korea and their constant threats of nuclear proportions, it seems the world has seen a return to the period leading up to and during the Cold War, where the issue of nuclear weapons was at its peak. While the United Nation has adopted a pacifistic stance on nuclear weapons and numerous initiatives have been made to decrease the risk of nuclear weaponry being put to use, nuclear weapons are still subject to much discussion and dispute. Especially with the increased media coverage around the testing of nuclear bombs by North Korea^{[1][2]}, the use of nuclear weaponry has sparked the rise of new concerns regarding not only the safety of humans but also the safety of the environment, as the destructiveness of atomic warheads has increased in order of magnitudes.

Key Terms

Nuclear warheads – A warhead containing a fission or fusion bomb³. The term will be used interchangeably with nuclear weaponry / missiles / bombs.

Doomsday Clockwork – World recognized initiative by the Bulletin of the Atomic Scientists to assess how imminent a doomsday scenario is for humans. This assessment is depicted using a clock with midnight representing doomsday. More can be read here:<https://thebulletin.org/multimedia/know-the-time>

Nuclear disarmament – The process of reducing in number or completely eliminating a country's nuclear weapons.⁴

Context:

The Doomsday Clockwork (see 'Key Terms') is at the time of writing this research paper (January, 2017), sitting at "2 and a half minutes to midnight". To give some perspective – the doomsday clock was set to 7 minutes to midnight during the Cuban Missile Crisis. The only time we have, according to the scientists behind the Doomsday Clockwork, been closer to a doomsday scenario was in 1953 with the US testing of the hydrogen bomb.⁵ The adjustment that moved the clock to 2 and a half minutes to midnight was made in 2017 in response to the growing tensions between North Korea and the US. Particularly, statements made by U.S. President Donald J. Trump that suggest that he is willing to use nuclear weapons have influenced the decision to change the time.⁶ Vladimir Putin, Russia's head of state, has also contributed to this decision⁷

¹ https://www.washingtonpost.com/news/worldviews/wp/2017/09/14/orth-koreas-latest-nuclear-test-was-so-powerful-it-reshaped-the-mountain-above-it/?utm_term=.3de8783e4b1e – visited on 16/01/18

² <http://www.aljazeera.com/news/2017/09/north-korea-confirms-sixth-nuclear-test-170903060221933.html> - visited on 16/01/18

³ <http://www.dictionary.com/browse/nuclear-warhead> - visited on 09/01/18

⁴ https://en.oxforddictionaries.com/definition/nuclear_disarmament - visited on 10/01/18

⁵ <https://www.nytimes.com/2017/01/26/science/doomsday-clock-countdown-2017.html> - visited on 10/01/18

⁶ <http://www.sciencemag.org/news/2017/01/doomsday-clock-ticks-30-seconds-closer-midnight-thanks-trump> - visited on 10/01/18

⁷ <https://www.theatlantic.com/science/archive/2017/01/the-doomsday-clocks-new-and-dire-warning/514544/> - visited on 10/01/18

Recently, concerns have been circling in regard to not only the safety of human life but also the environmental impact that nuclear bombs will have if they are used in a war effort again. Newer nuclear warheads are incredibly powerful with the Russia's "Tsar Bomba" being the most destructive nuclear warhead ever tested with its yield equivalent to 3.333 times that of the bomb dropped on Hiroshima, Japan in 1945.⁸ The radioactive fallout resulting from the detonation of atomic bombs will leave large land masses inhabitable for a very long time.

There are 9220 (some estimate 14000-15000⁹) stockpiled nuclear warheads spread across 9 nations.¹⁰ These countries include (in no specific order): United States of America, Russia, United Kingdom, France, China, India, Pakistan, Israel and North Korea. The majority of these countries have recently started investing more in modernization of its warheads and delivery systems.¹¹ India has developed nuclear weapons in breach of non-proliferation commitments¹²

Initiatives taken by the UN to diminish the threat of use of nuclear warheads:

UN has since its founding been in opposition to nuclear weapons. In fact, in its first resolution, the UN proposed absolute nuclear disarmament.¹³ Since then, many initiatives have been taken to further push for nuclear disarmament.

Here is an overview of the main points of some of the crucial agreements made bilaterally or through the United Nations regarding the issue of nuclear weapons:

- 1963:
 - o **Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (also known as the Partial Test Ban Treaty, PTBT):**
 - An agreement made to prevent further tests of nuclear weapons in the atmosphere.
 - Signed by original depository parties, the USSR, the US, the UK and Northern Ireland. Since then, it has been signed by upwards of 100 countries.¹⁴
- 1968:
 - o **Treaty on the Non-Proliferation of Nuclear Weapons (NPT)**
 - Its objective was to prevent the spread of nuclear weapons and weapons technology to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament and general and complete disarmament. It entered into force in 1970.¹⁵

⁸ <http://www.tsarbomba.org/Tsar-Bomba-Facts.html> - visited on 10/01/18

⁹ <http://www.icanw.org/the-facts/nuclear-arsenals/> - visited on 10/01/18

¹⁰ <https://thebulletin.org/nuclear-notebook-multimedia> - visited on 03/01/17

¹¹ <http://www.icanw.org/the-facts/nuclear-arsenals/> - visited on 10/01/18

¹² <http://www.icanw.org/the-facts/nuclear-arsenals/> - visited on 10/01/18

¹³ http://www.un.org/fr/ga/search/view_doc.asp?symbol=A/PV.17 - visited on 10/01/18

¹⁴ http://disarmament.un.org/treaties/t/test_ban - visited on 10/01/18

¹⁵ <https://www.un.org/disarmament/wmd/nuclear/npt/> - visited on 10/01/18

- Signed by 191 states in 2017.¹⁶
- 1996
 - **Comprehensive Nuclear-Test-Ban Treaty**
 - Treaty that bans all nuclear explosions, for both civilian and military purposes, in all environments.¹⁷
 - Signed in 1996; has yet to enter into force.¹⁸
 - Depository: Secretary-General of the United Nations.¹⁹
- 2017
 - **Treaty on the Prohibition of Nuclear Weapons**
 - First legally binding treaty prohibiting nuclear weapons. The treaty prohibits a wide array of nuclear-weapon-related activities such as: Undertaking to develop, test, produce, manufacture, acquire, possess or stockpile nuclear weapons as well as the use and threat of use of these weapons.²⁰

The future of disarmament programs:

The newly adopted Treaty on the Prohibition of Nuclear Weapons, is a good indicator of the general stance of the world on the issue of nuclear weapons.²¹ The future of disarmament programs relies on this new resolution as well as general initiatives by civil organizations like the 2017 Nobel Peace Prize Winner, ‘ICAN’ (International Campaign to Abolish Nuclear weapons) and the Bulletin of Atomic Scientists. There are still thousands of nuclear warheads stockpiled around the world and while that number has been steadily decreasing over the years, the number will need to decrease drastically every year if the ultimate goal is to permanently decrease the risk of global nuclear war by 2050.

Relevant Countries

United States of America – The country with the second largest nuclear arsenal and the highest military expenditure. (611.2 Bn USD)²² Arguably the most important actor in possibly permanently minimizing the risk of global nuclear war because of the sheer scope of the global influence possessed by the United States as well as the disproportionate number of nuclear warheads it possesses. It is important to note that the US has still shown any commitment towards the Treaty on the Prohibition of Nuclear Weapons adopted in 2017. **As has neither of the other nations that have direct access to nuclear weapons.**

Russia – The country with largest arsenal of nuclear weapons and has lately invested in developing even more advanced nuclear weaponry and technology to strengthen their nuclear weapon programs. Russia’s nuclear arsenal makes up roughly 50% of the world’s nuclear warheads. It is

¹⁶ <https://www.un.org/disarmament/wmd/nuclear/npt/> - visited on 10/01/18

¹⁷ https://en.wikipedia.org/wiki/Comprehensive_Nuclear-Test-Ban_Treaty - visited on 10/01/18

¹⁸ <https://www.un.org/disarmament/wmd/nuclear/> - visited on 10/01/18

¹⁹ <http://disarmament.un.org/treaties/t/ctbt> - visited on 10/01/18

²⁰ <http://www.un.org/apps/news/story.asp?NewsID=57139> – visited on 03/01/17

²¹ <http://www.nti.org/learn/treaties-and-regimes/treaty-on-the-prohibition-of-nuclear-weapons/> - visited on 16/01/18

²² https://en.wikipedia.org/wiki/List_of_countries_by_military_expenditures - visited on 10/01/18

therefore crucial for the safety of the world that Russia partakes in commitments to minimizing the risk of global nuclear war.

India – A growing economy and an increasingly influential country in the world, India has developed its fair share of nuclear warheads in breach of non-proliferation commitments. Resolving India's conflicts with Pakistan is most likely the first step towards making India participate in disarmament programs.

Pakistan – Pakistan has in the later years consistently made improvements to its nuclear arsenal. The same can most likely be said for Pakistan as with India. The India-Pakistan conflict is a key factor in making the two countries dismantle their nuclear programs.

North Korea – While having a relatively small arsenal of nuclear warheads, North Korea has taken significant strides to improve their delivery techniques with very recent tests suggesting that they now have missiles capable of carrying a nuclear warhead to the United States of America. North Korea is partially responsible for the new concerns about nuclear weapons as they have on numerous occasions stated that they are willing to use them against the US.

China – China has shown some commitment to disarmament programs, but continues to enhance its nuclear capabilities according to 'ICAN'.²³

France – Most of France's arsenal of 300 warheads are deployed on submarines. As the only member of the European Union with direct access to nuclear weaponry, it is often regarded as the safeguard for Western European countries. They are one of the countries with the highest number of nuclear warheads and are therefore vital to have on board in future agreements on nuclear disarmament.

Relevant Organisations

International Campaign to Abolish Nuclear weapons (ICAN / ican): ICAN aims to make as many member countries as possible part of the effort to minimize the risk of global nuclear war

International Physicians for the Prevention of Nuclear War (IPPNW): International federation of medical groups from 63 countries representing doctors, medical students and other health workers all sharing the idea that world should be free from the threat of nuclear war.

Bulletin of Atomic Scientists: Creators of the world-renowned Doomsday Clockwork assessment of the threat of nuclear war.

Relevant UN Resolutions

Refer to the section "Initiatives taken by the UN to diminish the threat of use of nuclear warheads" for any further information. Alternatively, check the footnotes for UN's official website to get more

²³ <http://www.icanw.org/the-facts/nuclear-arsenals/>

information about each of the resolutions. Bilateral agreements made outside of the UN are also present on UN's website.

Bibliography

Websites:

Visited on 03/01/18 and authors unknown (or no specific author):

<http://www.un.org/apps/news/story.asp?NewsID=57139>

<https://thebulletin.org/nuclear-notebook-multimedia>

Visited on 09/01/18 and author unknown (or no specific author):

<http://www.dictionary.com/browse/nuclear-warhead>

Visited on 10/01/18 and authors unknown (or no specific author):

<http://www.icanw.org/the-facts/nuclear-arsenals/>

http://www.un.org/fr/ga/search/view_doc.asp?symbol=A/PV.17-

http://disarmament.un.org/treaties/t/test_ban

https://en.wikipedia.org/wiki/Comprehensive_Nuclear-Test-Ban_Treaty

<https://www.un.org/disarmament/wmd/nuclear/>

<http://disarmament.un.org/treaties/t/ctbt>

https://en.wikipedia.org/wiki/List_of_countries_by_military_expenditures

<http://www.icanw.org/the-facts/nuclear-arsenals/>

<http://www.tsarbomba.org/Tsar-Bomba-Facts.html>

https://en.oxforddictionaries.com/definition/nuclear_disarmament

Visited on 10/01/18 and authors known:

Meyer, Robinson (Jan 26, 2017) <https://www.theatlantic.com/science/archive/2017/01/the-doomsday-clocks-new-and-dire-warning/514544/>

Lallensack, Rachael (Jan 26, 2017) <http://www.sciencemag.org/news/2017/01/doomsday-clock-ticks-30-seconds-closer-midnight-thanks-trump>

Bromwich, E. Jonah (Jan 26, 2017) <https://www.nytimes.com/2017/01/26/science/doomsday-clock-countdown-2017.html>

Visited on 16/01/18. Author: Ward, Alex (Sep 3, 2017)

https://www.washingtonpost.com/news/worldviews/wp/2017/09/14/orth-koreas-latest-nuclear-test-was-so-powerful-it-reshaped-the-mountain-above-it/?utm_term=.3de8783e4b1e

Visited on 16/01/18 and authors unknown:

<http://www.aljazeera.com/news/2017/09/north-korea-confirms-sixth-nuclear-test-170903060221933.html>

<http://www.nti.org/learn/treaties-and-regimes/treaty-on-the-prohibition-of-nuclear-weapons/>