

FORUM:	Disarmament Commission
ISSUE:	Measures to Prevent Terrorist Groups and Other Threat Actors from Acquiring Weapons of Mass Destruction
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Introduction

The term ‘Weapons of Mass Destruction (WMD)’ was initially utilized in 1937 to illustrate the severe damage caused by the bomber aircrafts and the highly treacherous shells dropped by such planes. These nearly-invisible aircrafts when seen from the ground level, particularly due to their high altitudes, posed an unstoppable threat to numerous municipalities especially during World War II, evidently during airstrikes in Hamburg, Germany, and Japan. Since World War II, the definition of WMDs has been broadened to incorporate biological and chemical weapons as well as nuclear weapons, such as atomic and hydrogen bombs. The definition of the term has fluctuated over the past decades, shifting to include a variety of weapons with distinct scopes in their capabilities of demolition. The currently accepted definition of the term outlines that WMDs do not include conventional weapons, as the amount of harm caused by WMDs is substantially larger than that of conventional weaponry.

Out of the forms of WMDs, nuclear weapons pose the greatest threat to humanity and the globe. Other WMDs like biological and chemical weapons do not inflict as significant a threat, as most nations have signed multiple international agreements against the use, stockpile, and even production of these kind of WMDs. Under the Biological Weapons Convention (BWC), despite several weaknesses it poses that must be strengthened, the globe has established a widespread standard that strictly restricts any forms of biological weapons. Moreover, for chemical weapons, eight countries—Albania, India, Iraq, Libya, South Korea, Syria, the United States, and Russia—have claimed to possess stockpiles of chemical armament, but all the countries mentioned above except for the United States have since destroyed their stores of



Types of Weapons of Mass Destruction (CBRN)



these weapons when joining the Chemical Weapons Convention (CWC) as state parties. Meanwhile, the United States has destroyed most of its chemical weaponry and plans to complete this process by September 2023 in accordance with other state parties. As such, targeting the non-proliferation of nuclear weapons is a crucial factor in preventing the non-state actors both access and possibly employ WMDs during combats and as form of terrorism. Although multiple international actions have been previously carried out with the goal of non-proliferation of WMDs, it is still not certain that lone actors and terrorist groups are hindered from access and usage of these destructive weaponry, demanding the governments of states to establish adequate, effective, and strong frameworks and measure to ultimately prevent these actors from acquiring and potentially employing this armament.

Background

Weapons of mass destruction (WMD) are typically acknowledged as chemical, biological, radiological, and nuclear weapons, also known as CBRN weapons. The international concerns have elevated regarding the non-state actors' access to these types of weapons and their actual usage of WMDs that have caused civilian fatalities across the world. For example, the Non-state actors Database (POICN) associates 18 CBRN incidents from the total of 38 cases recorded since 2012 to lone actors, autonomous cells, and terrorist groups with malicious intent, mainly acting with the purpose of causing horror and fear among innocent civilians. 77% of the cases involving non-state actors were caused by either religious or ethno-nationalist motivations, especially in regions such as the Middle East. The widespread range of actors behind these devastating cases make it challenging to isolate specific types of threats posed by the WMDs, but rather emphasize again the need for urgent solutions during urgent situations at the current moment. What is even worse is that non-state actors and terrorist plots are among the most difficult to detect and punish due to levels of corruption and the connections present within the regions they act in, allowing them to relatively easily secure WMDs and possibly cause irreversible damage to people's lives.

Problems Raised



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Qualities of Lone Actors and Autonomous Cells

Although lone actors are typically thought to have less harmful technical capabilities than an organized terrorist group, they often have a different set of operational opportunities that could be more advantageous for a WMD attack than those of a larger group. For example, technical insiders that possess access to materials and sources that can be developed into forms of WMDs and certain



Image of an existing “lone-wolf” terrorist

technical knowledge in developing the armament themselves pose a significant CBRN threat to the public. The ability of law enforcement to detect the so called “lone wolf” terrorists is naturally limited. For example, shortly after 9/11, Dr. Bruce E. Ivins, a U.S. Army civilian research scientist mailed letters containing a highly sophisticated forms of anthrax substances to media offices and the offices of two U.S. senators. Five people were killed, and 17 innocent civilians became gravely ill from this incident, along with the mail services being held for several weeks. Furthermore, one of the Senate office buildings was shut down for fear of additional attacks. Only five years later did Dr. Ivins became a suspect in the investigation process of the anthrax mailings, depicting the difficulties in feasibly detecting and recognizing the true intentions and the acts of solely operating terrorists.

Technological Advancements Improving the Capabilities of WMDs

Recently, rapid technological progress has been reported in distinct fields of study, such as

materials science, pharmacy, communications, automation, biotechnology, and robotics.

The development of these types of technologies can lead to new and more effective forms of WMDs. For instance, synthetic biology using



Image of scientific knowledge and technologies used in labs, which can possibly be employed for developing WMDs

technologies such as commercial “gene fabs” allows the generation of new variations of existing



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treacherous microbiological pathogens or even completely unique agents that are devised for increased resistance towards current antibiotics and vaccines.

However, the most compelling recent developments affecting the overall WMD threat landscape may be further related to the acquisition, production, and weaponization of CBRN agents. Numerous technological trends, from the miniaturization of manufacturing systems for WMDs to the quickened prototyping process, can promote and intensify the levels of WMD production. Throughout history, producing enough nerve agents as forms of chemical WMDs required experienced chemical install and monitor large equipment and dangerous reagents. Additionally, leaks and dangerous explosions were always a concurring problem for terrorist organizations when generating CBRN armament with the lack of experience and knowledge to execute such weaponization. Nonetheless, the emergence of new technologies, such as chemical micro-reactors, can allow the independent production of small quantities of chemical weapons, making non-state actors acquire extremely destructive armament almost without danger and with a lower possibility of detection by the authorities.

Furthermore, the development of the internet and online educational courses such as MOOC (Massive Online Open Course) tolerate even the radicals located in the most remote areas of the world can gain professional knowledge and specialized skills to possibly produce WMDs from the CBRN resources collected via connections or illegal routes. Thus, technological development across the globe poses an extreme threat towards the non-proliferation of WMD and the ultimate usage of such weaponry from non-state actors.

International Actions

Establishment of International Agreements regarding WMD

A wide range of international agreements regarding the proliferation, development, and production of WMD has been signed and ratified by almost all nations within the world, which has led to a significant halt regarding the means of entry that the multiple terrorist groups and non-state actors possess for CBRN weapons. For example, the Chemical Weapons Convention (CWC) prohibits the large-scale use, development, production, transfer, acquisition, and stockpiling of chemical weapons. This arms control agreement is administered by the Organization for the Prohibition of Chemical Weapons



Logo of the OPCW



(OPCW), and it outlines that the destruction process of chemical weapons must happen under the verification by the OPCW. A unique feature of this convention is its ‘challenge inspection’ procedure where any state party in doubt of another state party’s compliance with the convention can request an inspection, and thus, all state parties are subjected to unpremeditated inspections. The convention entered into force on April 29, 1997, and as of March 2021, 193 states have become parties to this convention. These state parties have thereby accepted their obligations of chemical disarmament and consequently, 98.5% of the world’s declared chemical weapons stockpile have been destroyed as of February 2021. Although the CWC is renowned as an international treaty that successfully bound nations from producing or stockpiling various chemical weapons, there is still, albeit slight, possibility of corrupted governments in state parties to cooperate with non-state actors in developing WMDs, not only engaging in non-compliance of these treaties, but also working towards demolishing global sustainable peace, for whatever purpose it might hold.

Actions Executed by the United Nations

Over the course of the past few decades, the United Nations, particularly the Security Council, has addressed the threat of WMD terrorism on numerous occasions. For example, in resolution 1373 (2001), the Council recognized the clear correlation between international terrorism and the illegal transfer of CBRN materials both across and within borders of states. Its seminal declaration on the issue was released in the form of resolution 1540 (2004), through which the Security Council asserted that the proliferation and dissemination of CBRN weapons and their means of delivery poses a drastic threat to international peace and security. More recently, the Security Council again called upon member states in resolution 2325 (2016) to bolster their national anti-proliferation regimes to effectively counter terrorist organizations from obtaining such destructive weapons.



Image of a meeting conducted under the UNCT

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The UN Global Counter-Terrorism Strategy is also an essential example of the United Nations acting upon this issue. It primarily calls upon member states, international organizations, and other nongovernmental organizations (NGOs) “to combat smuggling of CBRN materials, ensure that advances in biotechnology are not used for terrorist purposes, improve border and customs controls to prevent and detect illicit trafficking of CBRN weapons and materials, and improve coordination in planning a response to a terrorist attack using CBRN weapons or materials.” The United Nations Counter-Terrorism Center (UNCCT), which was involved with the installation of the strategy, has already developed a program to tackle the chemical, biological, radiological, and nuclear terrorism (involving CBRN weaponry). UNCCT’s Programmed on Preventing and Responding to WMD/CBRN not only seeks to reinforce partnerships to devote to existing capacity-building measures of the international community, but also provides capacity-building support, primarily concentrating on aspects such as “border and export control, strategic trade control, illicit trafficking, protection of CBRN materials and critical infrastructure, incident response and crisis management, and CBRN forensics, among others.”

From 2018 to 2020, the UNCCT developed seven pilot projects that advocate the program’s fundamental values and help take effective action against future CBRN terrorism cases. One notable example among the established projects is the enhancement of knowledge regarding the advances in science and technology to cope with WMD terrorism. Enforced within the framework of the Global Counter-Terrorism Coordination Compact Working Group on Emerging Threats and Critical Infrastructure Protection and in cooperation with the United Nations Interregional Crime and Justice Research Institute (UNICRI), this particular project aids states and their national agencies to evaluate how advances in science and technology can augment or heighten terrorist capabilities to acquire and ultimately deploy WMDs, potentially addressing the impacts of the rapid development of technological knowledge on WMD/CBRN weaponry. Apart from this intriguing example, the projects also encompass developments of capabilities of preparation and responses toward attacks in LEDCs (less economically developed countries) especially exposed to non-state actors or possess limited groundworks to counter terrorism; training programs for law enforcement, border and customs officials, and prosecutors to improve the effects of risk-assessment and security inspections in case of illicit trafficking of CBRN materials; and the advancements in the interagency preparedness and response of international agencies across the humanitarian, health, and security sectors within member states as they request for victim support and relief operations as a result of CBRN attacks. Although these recent developments in resolving the WMD terrorism, there are additional areas present with rooms for improvement, indicating the need of further solutions to be suggested and implemented to eventually settle this issue.



Key Players

United States of America

The United States of America has been involved in developing a number of both national and global operations and countermeasures against the terrorist groups acquiring and deploying WMDs as acts of terrorism. This is mainly due to

several threats the nation has experienced in the past from the dangers of CBRN weapons and other terrorist attacks. The US, with the essential aim of preventing the American citizens from terrorist threats, have already created governmental authorities and organizations, such as the Department of Homeland Security (DHS). Its major efforts in achieving this goal include “detection of explosives and other weaponry, helping to protect critical infrastructure for the nation and cyber networks from potential attacks, and building information-sharing partnerships with organizations across the country and the world. These types of bureaus allow United States to maintain its position as a key player in reducing and possibly eradicating the damage caused by the WMDs and the proliferation of such weapons. For instance, it has cooperated with not only the United Nations but also other nations and international organizations in developing actions regarding this issue, mainly as a leading MEDC (more-economically developed countries) aiding LEDCs in maintaining and even advancing frameworks to counter non-state actors and their attacks.



Statement from the DHS including its aim

Iran

Iran commenced its nuclear program in the 1950s but continually insists that the program is peaceful and is for defensive purposes.

Throughout the 20th century, the country received assistance through the “United States Atoms for Peace” program that shared nuclear materials and



Image of the meeting for JCPOA



technology with other countries for peaceful uses. This was relatively short-lived as it ended during the Iranian Revolution in 1979, but Iran continued to develop its nuclear program since then. After being placed under heavy international negotiations and sanctions between 2002 and 2015, Iran yielded the JCPOA (Joint Comprehensive Plan of Action) which outlined a 25-year limit on the country's nuclear capacity. Although Iran is not officially recognized as a state possessing nuclear weapons, its continuous attempt to expand its nuclear program makes it evident that Iran is an obstacle in nuclear non-proliferation. Due to the presence of non-state actors across the Middle East region and its history of corruption within the armed forces and the government, Iran still poses a possibility as a strong collaborator for non-state actors and terrorist groups, especially those who generally share the Islamic values.

Possible Solutions

Revision of BWC and Other International Agreements

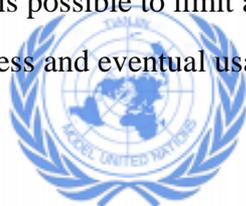
Although the BWC received enough attention when initially introduced, it was lackluster in its implementing force—there was no legitimate method of ensuring nations were complying with the convention. Thus, one possible solution would include the revision of the BWC to strengthen implementation, universalization, and compliance towards convention. Specifically, this revision would allow the BWC have a formal method of implementation and encourage more nations to become state parties to the convention, further enforcing the convention itself and tackling the major flaws it faces currently and ultimately promoting non-proliferation of WMDs within the borders of member nations. On the other hand, even though the CWC has almost universal support as well as a powerful implementing body, chemical weapons are still being used today: most notably, in the Syrian Civil War.



Logo of the BWC

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Therefore, another solution could be related to state parties supporting the OPCW. There are a variety of ways member nations can support the OPCW through international cooperation (financial aid), but in the end, this support from member states allows the OPCW to strengthen their implementation methods. In short, the cooperation allows for more thorough investigations and overall, a stronger implementation of the CWC. Through strengthening the conventions and other international treaties mentioned above, it is possible to limit and restrict the source channels for the non-state actors, prohibiting their access and eventual usage of WMDs.



Improvements in Surveillance Measures

Although there has been previous international and national efforts regarding the improvements in surveillance especially along the borders and within customs of nations to prevent the trafficking of WMDs and other supplies required for the weaponization of CBRN agents, further measures, and solutions regarding the levels of surveillance present within distinct areas of a state. For instance, corruption is a major factor in allowing non-state actors and even lone terrorists to gain access towards key materials needed for the development of WMDs. Corrupted government officials or employees can extort these sources utilizing their position as an advantage and possibly provide such substances to terrorist organizations, in return of bribes or other benefits. Moreover, the significance of “dual-use” concept is also highlighted within the context of the weaponization of CBRN materials, as scientists or professionals working in the field of military research and weaponry production are always exposed to the possibility of evolving malevolent intentions in inciting terror and eventually carrying out attacks to the public through these dual-use technologies. Thus, measures to prevent and reduce these types of possible factors that hasten the proliferation of WMDs throughout non-state actors must be immediately established and implemented for urgent actions.

Glossary

Weapons of Mass Destruction

Weapons of Mass Destruction, or WMDs, are nuclear, radiological, chemical, biological, or other weapons that can bring a great amount of harm to many humans that can also cause a significant amount of destruction to man-made structures

Chemical/Biological Warfare

The term used to describe the use of chemical or biological agents as weapons with the intent to injure or kill humans, livestock, or plants—the use of the weapons as a means of war

Biological Weapons Convention

A disarmament treaty that effectively bans biological and toxin weapons by prohibiting their development, production, acquisition, transfer, stockpiling and use



Chemical Weapons Convention

A multilateral treaty that bans chemical weapons and requires the member states to destruct such armament within a specified period

POICN

The “Profiles of Incidents involving CBRN and Non-State Actors database” (POICN), which consists of 517 (As of 2017) CBRN terrorism–related events since 1990

Dual Use

Products, technologies, and software’s normally employed for civilian purposes, but which may have military applications

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