Biological Agents as a Form of Modern Biological Weapon: A Legal Perspective

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Abstract

The development in weapons manufacturing came with the development of man over time and his need for them in quantity and quality. Man has moved gradually and rapidly from the manufacture and use of traditional weapons such as swords and spears to the use of cannons, aircraft, warships, rifles, missiles and advanced electronic weapons. Rather, man has used more deadly weapons than traditional weapons, namely the use and production of nuclear, chemical and biological weapons, violating all limits associated with the protection of human rights especially his right in life, to live in peace, and to protect his body from harm.Therefore, the issue of modern weapons is one of the important topics that preoccupies the international community. Such weapons have been evolved like biological weapons with their methods, perceptions, concepts, and methods of their spread. Likewise, in recent times such weapons have become one of the prominent non-traditional sources of threatening international peace and security. Thus, this study explained the phenomenon of biological weapons and the extent possibility that human may use biological weapon in the future.

Key words: Biological weapons, human rights, international responsibility, Security Council.

Introduction

The issue of biological weapons and their development is one of the important topics, because such programs are in continuous development. Biological weapons are used in various ways and by different means; they may be used by traditional non-living means such as explosives, missiles or bombs. Rather, they may be used within living means such as plants, animals or humans. Lately, the use of such programs has become an easy process and at lower costs. Once an infectious virus manufactured in advanced laboratories is injected into plants, animals, or humans, this will lead to the spread of the virus quickly and thus turn into an epidemic that is difficult to control easily because of its sever and significant negative impact on society.

The problem of this study is the extent to which a person who transmits viruses can be considered a form of biological weapon; that is, is it possible for countries and other parties to use humans in the near future as a weapon to transmit germs or viruses against each other or not.

The Extent to Which Human Can Be Used As a Biological Weapon

In order to clarify the possibility of using humans as a biological weapon in the future, we must first explain what a biological weapon is, as follows:

What Are Biological Weapons?

Weapon is a collective name for a machine of war on land, sea, and air (2). Weapon is defined as "a tool used during combat to liquidate or to paralyze the opponent or the enemy, or to destroy their property, or to strip them of their resources. Weapon may be used for the purpose of defense, attack, or threat (Moulay, 2018).

The term biology is a word derived from the Greek language Bios meaning biology and *Logos* means study. The term biological refers to the study of biology. It is defined as the science of life and living organisms. Since, a living organism is a living entity consisting of one cell, for example, bacteria, or several cells, such as animals, plants, and fungi (What is Biology). The use of biological programs is not new. They have been used as weapons and tools of war and terror for thousands of years to incite fear and harm in humans, animals and plants. They are invisible, silent, odorless, tasteless, easy to spread and disperse, and are inexpensive to produce (Hawley & Eitzen, 2001).

The biological weapon contains a toxic substance produced by bacteria, plants, or animals. It can be transported by a missile, aircraft, boat, truck, missile, plant, animal, or human being to the target destination (Hawley & Eitzen, 2001). Furthermore, the biological weapons can be spread in the form of injections or transmission of infection to an animal, insect or human (Mosbah, 2000).

There are several definitions for biological programs. The United Nations Organization - Office for Disarmament Affairs- defined biological weapons as complex systems that spread living organisms or toxins that cause diseases to harm or kill humans, animals, or plants. They generally consist of two parts, i.e., a weaponized agent and a delivery mechanism. Likewise, they include strategic or tactical military applications so that can be used in political assassinations, infection of livestock or agricultural products to cause food shortages and economic loss, creation of

environmental disasters and the introduction of diseases on a large scale and arouse fear and mistrust among the public (UNODA, 2019).

The World Health Organization (WHO) defined in 2004,the biological weapons as those weapons that achieve the intended effects through infection with pathogenic microorganisms and others, including viruses, and thus are used to attack humans, animals, plants, etc. (Roffey, 2004). A biological weapon is also viewed as a microorganism or a toxic substance derived from it. It is used in wars by agents to kill people, animals or plants, with the intent of achieving political and social goals (Koenig et al., 2006). Some researchers explained the composition of biological weapons instead of defining it. It includes microorganisms such as bacteria, viruses, fungi or toxins found in nature that can be used to kill or injure people (Hooker et al.,202).

The International Security Dictionary also explains in detail that biological weapons to consist of microorganisms and biologically extracted toxins that are used to kill or harm humans or animals. These weapons have the ability to reproduce and spread, which lead to injuring and killing huge numbers of people. They are in turn classified as a weapon of mass destruction such as nuclear and chemical weapons (Robinson, 2009).

On the other hand, some definitions confirmed the purely military side, so that some researchers defined the biological weapon as a living organism or poison used against the enemy. They aim to inflict the largest possible number of deaths and injuries in its ranks or expel them from the area of confrontation, whether in the military forces or civilians. Besides, these weapons are used to destroy the opponent's agricultural and animal wealth (Murad, 1439 AH).

Biological weapons refer to every weapon that includes a biological warfare agent. They are delivered dropped, distributed and disseminated in the form of aerosols or particles of a liquid or solid substance, finely divided and distributed through one of the gases or air. Insects, air or water contaminated may be used to spread the disease (Ali & Jithoum, 2012).

It is the intentional use of microorganisms and toxins in general, microbes, or of plant or animal origin to produce diseases and/or death in humans, livestock and crops (DaSilva, 1999). Still some researchers classified biological programs and their use in the category of terrorist operations. So we got a new term, i.e., bioterrorism which stands for the terrorist or extremist groups' use of microorganisms (bacteria, viruses and fungi) or toxins to produce weapons that cause death and disease among humans, animals and plants (Pal et al., 2017). As the US Emergency Health Authority Bill 2001 defined bioterrorism as the intentional use of any microorganism, virus or biological product that may be engineered to cause death, disease, or any other biological defect in a human, plant, or other living organism in order to influence the behavior of government, or intimidation or coercion of the civilian population (https://www.historyofvaccines.org/).

Biological weapons present three scenarios, i.e., war, terrorism, criminal acts. In the three of these scenarios, different biological or toxin agents will be used, with different degrees and types of biological weapons. Diseases or poisons, each depends on three factors, namely the intention or purpose of use, the extent of the capabilities, skills and technology in using them, and the agent (UNODA, 2017).

Examples and Evidence of Using Biological Programs

The US National Library of the National Institute of Health published a study by in 2003 which indicated that during the past century, millions of people died due to infectious diseases. Tens of thousands of these deaths resulted from the deliberate use and release of pathogens and factors of diseases and toxins. The study also reported that most of these diseases were launched by the Japanese in their attacks on China during World War II (Atwan, 2020). The Assyrians in about 600 BC poisoned the wells of their enemies with ergot barley, which affected those who drank from these poisoned waters with disease and death (Texas Health and Human Services, 2015). In the same vein, the Greeks, Romans, Persians and others threw animal corpses to pollute the water wells of the enemies (Pal et al., 2017).

In 1346, the Tatars used contracted the plague as a weapon against their Italian enemies in the besieged city of Cava. It led to the spread of the disease in the Mediterranean region and throughout Europe (Lentzos, 2016). Also in 1763, the British used smallpox in North America against the Red Indians, i.e., the original inhabitants of the continent (Mosbah, 2000; Riedel, 2004). In the aftermath of World War I, the Germans used a group of pathogenic microbes that infect humans and animals in the European countries they occupied, such as cholera, anthrax and plague (Ashour, 2005)

In World War II, Japan engaged in a research program known as Unit 731. It is located in Manchuria near the city of Pingfan, to develop, produce and secretly test biological weapons such as plague, smallpox, hepatitis and cholera, so that it used them against war prisoners of the allied forces in China between the years 1937-1945 (Atwan, 2020).

In 1995, a Japanese company managed to produce a gas that affects nerves known as Sarin gas. It led to the injury of more than 5,000 people (Texas Health and Human Services, 2015). Likewise, terrorist groups have used such malicious programs, for example, in 1982 in the State of Oregon USA, the followers of the master Rajneeshee contaminated the restaurant salads with Salmonella typhimurium in order to prevent the residents of the city from participating in the local elections. This caused the injury of more than 700 people (Texas Health and Human Services2015). Al-Qaeda also focused on developing and using these weapons and operating a laboratory in Afghanistan before it was overrun by US forces in 2001 (Atwan, 2020).

If we look at the coronavirus, we notice that it is a new type of coronavirus known as SARS. It causes severe acute respiratory syndrome and some types of colds and high body temperature.

The disease caused by the new coronavirus, which first appeared in Wuhan, China, is called (COVID-19). The World Health Organization (WHO) announced on December 31, 2019 the emergence of the Corona virus and that the world should prepare for the transmission of this virus from one person to another. The Chinese authorities in turn, closed the seafood market in the Wuhan region and imposed quarantine on other regions in China in order to control the disease, but the disease got out of control and spread to the whole world (Ali, 2020: UNCIEF). Russian channel (RT) published a report in which two Chinese biologists (Li Xiao and Putao Xiao) indicated the reasons for the spread of the virus in China, was Chinese scientific laboratories located in Wuhan, near the market for marine products. The laboratories are only 280 meters away from the market and the other is 12 km. The two experts say that the laboratory near the market has spread the disease twice when bats attacked the employees inside the laboratory. these bats were tested on, especially SARS-COV disease. The two experts think that the virus was somehow able to get out of the laboratory (Arabic.rt, 2020).

Despite the denial of Chinese scientists of their role in the spread of this virus, they always confirm that the Corona virus is among a large family of viruses that the laboratory has been studying since 2003. (Ali, 2020). On the other hand, China accuses America of being the responsible who created this virus in Fort Wittrick laboratory, then American spred them through its agents in China using a laboratory which is located in the state of Maryland, and it was closed in late 2019 was for research into bacteria and viruses of the US Army Medical Command (Ali, 2020).

Characteristics of Biological Weapons

According to what has been presented of concepts and historical evidence on the use of biological weapons, it is noticeable that these weapons have different characteristics, the most important are :

1. Most of the biological weapon agents are living organisms that are reproduced and multiplied after their spread. It means that they are transmitted from an infected organism to another organism, and there are biological agents such as viruses and toxins, in which human is the main intervention and the main reason for creating such dangerous agents. Viruses and toxins are not living organisms; they are not generated and can be produced industrially in laboratories (Tullio & Schmalberger, 2003).
2. Such weapons can be used either by states or their agents or by terrorists with difficulty reaching their perpetrator (Ghazaleh, 2016). Also, biological agents can be disseminated by spraying them in the air, a person-to-person contact, and infecting animals that are transported disease to humans and through populating food and water (Ready,gov, 2020).

They can also be injected directly under the skin, or it can be given by means of a spray or chewing, such as Insulin, to the person who is intended to transmit the infection to other people (Hooker et al., 2021).

Legal Rules That Guarantee His Human Rights

Human is from Allah's creatures; human is honored and favored over all His creatures. Allah sent him laws and teachings through His prophets, messengers, and books in order to walk in a straight line while practicing rights and duties. It can be said that human is a social being by nature. Thus, human practice of his rights must be relative and not absolute, i.e. they should not abuse the right granted to them, as there are no absolute rights. The rights of freedom of each person ends at the rights and freedoms of others (Muhammad, 2013).

The dictionary of human rights terms defines *rights* as the ability of a person to perform a work that the law grants him and protects him in order to achieve an interest that he approves, and that every right corresponds to a duty (Abdel Kafi, 2006). Likewise, the dictionary of political and international terms defined the concept of human rights, as the broad concept of the natural rights of all beings and humanity, i.e. their right to life, liberty and equality before the law (Badawi, 1989). Human rights are also defined as fundamental regulations which aimed at protecting all peoples from cruel and inhumane treatment, threats to their lives and persecution (Ferial et al., 2006). Some defined human rights as a group of rights linked with human characteristics and stipulated in the international conventions in which human enjoys. No one should deprived any human from such rights for whatsoever reasons of discriminations reasons, like religion, language, weight, race, ethics, genders and others (Alasrag, 2006). According to these definitions on human rights, they are characterized to be a set of individual and group rights which are associated with every person. They are international. They are applied on the equality without any discrimination on any individual all the world over. Likewise, human rights are not purchased, acquired nor inherited. They are simply the possession of all mankind as they are human. Human rights are authenticated in every human being. Furthermore, a second party has no right to violates them. No one can take them. It is unlawful for any person to deprive any person from his rights accept in legal and determined clearly in some circumstances like delimiting the freedom of any person if it is proved by a legal court of committing crime.

Legal Rules That Guarantee the Individual Basic Rights

Accordingly, it is induced that human enjoys a set of rights. Therefore, all international agreement and conventions which stipulated or connected with human rights confirm a set of rights that human enjoys. These rights will be focused on in this study. The rights which are linked with the human body, i.e., the rights which hurt the human physical body and lead to his death or abuse and their rights to survival (Al-Fetalway, 2009). The Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights (ICCPR) have affirmed that every individual has the right to life, physical or physical integrity and to live in safety and peace, and he may not be subjected to torture or inhuman treatment, or to conduct any medical or scientific experiment on anyone without his free consent (United nations, 1948).

Likewise, the Charter of the United Nations stipulates human rights without specifying these rights, but the charter is satisfied with the emphasis on the protection of human rights in general and obligate all countries all countries not to prejudice them (United Nations, 2000). The Charter of Fundamental Rights of the European Union (2000) also stipulates that human dignity is sacred and must be respected and protected. It is not permissible to conduct any medical experiment on a person unless it is done with his personal consent (46) Mankind, by his nature, like plants and animals can be the subject of medical and biological experiments. He can be used as a weapon that transmits diseases by the warring forces and terrorist groups. A good example of this is when the Tunisian authorities announced on April 16, 2020 the arrest of a terrorist cell that was recruiting people infected with the Corona virus in order to attack the police and the army and transmit infection to them (Debara, 2020).

Legalization of Biological Weapons

The Role of the Security Council and International Agreements on Biological Weapons

The international conventions are among the important sources within the framework of general international law and humanitarian law in particular. They issued a number of conventions, protocols and decisions that can be relied upon in order to establish controls and rules in the case of the use of biological weapons or agents.

The frequent use of biological and chemical weapons and poisonous gases during the First World War, led to the signing of the (1925) Geneva Protocol on the Prohibition of the Use of Asphyxiating and Poisonous Gases or Other Gases and Bacteriological Materials in War. This protocol entered into force on February 8, 1928 (UNODA, 1925). However, this protocol raised several problems, the most important of which are a large number of countries did not ratify it. This protocol prohibited only the use of biological weapons only and did not prohibit their production. Nor did it prohibit their storage, possession or transfer. These were considered a negligence on the part of this protocol (Murad, 1439 AH).

Therefore, the international community tended to issue another agreement to fill the deficiency in the Geneva Protocol of 1925. The United Nations General Assembly (UNGA), at its 26th session, adopted Resolution 2826, the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on the destruction of those weapons on 4/10/1972. This agreement came to confirm several issues that the member states are obligated to do, namely:

Each of the state members on this agreement undertakes to never, under any circumstances, develop, produce or stockpile, and the acquisition or preservation in any other way of bacterial agents or other biological agents, or toxins, whatever their origin or method of production, or their destruction or conversion for use in peaceful purposes, provided that in this process all necessary preventive measures are taken into account to protect the population and the environment (ICRC, 1972).

There are several agreements in addition to the previous agreements, that include a ban on such weapons, as the four Geneva Conventions of 1949 criminalized conducting biological experiments on citizens of the opposing country, through Article (12) common to the first and second agreements, Article (13) of the third Agreement, and Article (32) of the Fourth Convention and Article (11) of the First supplementary Protocol to these conventions of 1977, due to the physical and health damages that may result from conducting biological experiments for citizens of an enemy country that is a party to the armed conflict, even if they are exposed to with their consent (Sabrina, 2007).

Also the ICCPR (1986) which entered into force in 1976, stipulates in Article (7) that “no medical or scientific experiment may be performed on anyone without his free consent.” In addition, the ban on the use of this type of weapon was mentioned in the Declaration on the Rules of International Humanitarian Law related to the conduct of hostilities in non-international armed conflicts of 1990 specifically in the first paragraph of the second item entitled the prohibition of chemical and bacteriological weapons by stating that it “applies during any conflict” Non-international armed customary prohibition of the use of bacteriological (biological) weapons

The prohibition of the use of biological weapons is stated in Rule (73) of customary international humanitarian law. So that the states enshrine this rule as one of the rules of customary international law applicable in international and non-international armed conflicts. This rule is applied to biological weapons intended to cause harm to humans (Henckertz & and Beck, 1427 AH). Likewise, the Statute of the International Criminal Court (the Rome Statute) of 1998 criminalized the use of biological weapons, within the text of Article 8 (paragraph 2 / a / 2) of the war crimes section, which stipulates “torture or inhumane treatment, including conducting biological experiments.” (https://www.icrc.org/ar)

The Security Council prohibited the use of biological weapons in Resolution (1540) on April 28, 2004 under Chapter VII of the Charter of the United Nations. The Security Council also issued several resolutions such as Resolution (1673 in 2006); Resolution (1810, in 2008); Resolution (1977 in 2011) and Resolution (2055 in 2012). Yet, all these resolutions confirmed that the proliferation of nuclear, chemical and biological weapons and their means of delivery, development and possession poses a threat to international peace and security (United Nations, 2004).
The UNGA has issued several resolutions, whether with regard to the Geneva Protocol of 1925, or the Convention on the Prohibition of the Development, Production and Stockpiling of Biological and Toxin Weapons and on their Destruction of 1972. It stresses in all these resolutions the full and effective danger of bacteriological and toxin biological weapons and their destruction (UNGA, 1972). If through the above-mentioned agreements and resolutions, we note that the use, production, development, storage, acquisition, preservation, etc. Biological weapons are forbidden. So, it is not permitted to any country to use or conduct medical or biological experiments on humans, because of their devastating effects on all aspects of life .

International Responsibility for the Use of Biological Weapons

Responsibility for violating the rules of law is what gives these rules the status of obligation and effectiveness (Al-Taie & Al-Dreidi, 2009). Therefore, international responsibility for international crimes appears in the event that a person of international law breaches an international obligation, so that this obligation is of a degree of importance and is necessary to protect the basic interests of society. Yet, any breach of this obligation will make it as a crime in the eyes of the international community as a whole. Thus, it would threaten the international peace and security, and the best example of that is the commission of war crimes or crimes against humanity or crimes of genocide, etc. (Al-Azmat, 2014). Accordingly, in order to apply the rules of international responsibility against the acts that are committed due to the use of weapons or biological agents, we must first identify the international responsibility and indicate the most important conditions that must be met in order for such responsibility to be established.
The concept of international responsibility has been defined as the means by which the defaulting state should provide compensation to the victim state for committing an act that violates public international law and refraining from conducting an act stipulated in this law (Al-Jundi, 1990). International responsibility is also defined as a group of international rules applicable to persons of international law in the event that they commit an act that abuses the obligations established in accordance with the provisions of international law, which causes harm to a person of international law, and responsibility arises when a state or a person of international law does an act that abuses to international obligations, then it becomes obligatory to repair the damages caused from these actions (Reda, 1999). Therefore, we note from the above definitions of international responsibility that three main conditions must be met for the establishment of international responsibility, namely:

The Incident That Generates International Responsibility

is either an illegal international incident under general international law, and this is the original principle of international responsibility, or it is a legitimate international incident, but it is liable to cause damage, in the case of absolute objective responsibility in the International law (Al-Anbaki, 2001).
Second: Attributing the violation to an actor of international responsibility. To establish international responsibility, it is required that the work or act that violates the provisions and rules of international law has been committed by a state or a person of international law. The state, as an international legal person, is responsible for the violating acts by its three authorities (Al-Taie & Al-Dreidi, 2009)

Third: The Act Causes Harm to Those Who Encounter It

One of the basic conditions for the establishment of international responsibility is that (damage) occurs to one of the persons of international law, and that is because it is not sufficient for the establishment of this responsibility that a person of international law issues a violation of its international obligations unless this breach results in harm with third parties. Damage is an essential element of international responsibility that cannot be taken when damage is not available, that is, the existence of a causal relationship between the illegal act and the damage resulting from it (Al-Fahdawi, 2014).
Article (31) of the International Responsibility for Wrongful Acts of 2001 stipulated that “the responsible state is obligated to compensate the entire loss resulting from an internationally wrongful act, and the loss includes any damage, whether material or moral, resulting from an internationally wrongful act committed by the state.” (casebook.icrc.org).
If we conclude that the concept and conditions of international responsibility apply to the damage caused by biological agents or biological weapons. If we take, Covid-19 as a model for biological agents, we note that all the conditions of international responsibility apply to them. Hence, the virus was produced or created in one of the countries’ laboratories, whether it was China or others; it caused damage to most countries of the world and touched all aspects of life. If the investigations proved that this virus was produced in one of the Chinese laboratories and led to its leakage outside the laboratory, for example, and whether that happened intentionally or unintentionally and in turn caused damage to other countries. In this case, all the conditions of international liability apply to China.

Therefore, China has to compensate for the damages that befell other countries. Also, China has breached all the obligations it has undertaken under the aforementioned international agreements.

Results and Conclusions

Through the presentation the issue of the transmitter of biological factors as a form of modern biological weapons, the researcher reached several important results, namely-:

1. The biological agents are small materials or organisms that cannot be seen by the naked eye; they are traditional concrete weapons such as missiles or bombs, so the goal is to cause damage, whether in terms of political, environmental, humanitarian or economic aspects.
2. Also, these viruses and other biological programs are mostly not present in nature, that is, they are created by the management of secret laboratories and they are tried on the plant, animal or humans, in order to deliberately use them to achieve certain goals.
3. Like plants and animals, human being can be a taken for medicinal and biological experiments. Human being has been used since ancient times; this is what was previously displayed as the forces or terrorist groups can use man as a weapon of transmission diseases. Besides, many biological experiences have been conducted on human in order to explain the effectiveness and impact of biological factors, whether on human, economic or political disciplines.
4. The researcher displayed a number of agreements and resolutions issued by the Security Council. All resolutions confirmed that no country is permissible to use or conduct illegal medical or biological experiments on the human being, because of its devastating effects on all aspects of life.
5. States have the right to use biological factors peacefully in medical services, because progress in the field of science is a legitimate right for each country. But, all states are provided not to use such programs illegally, which leads to damage to other countries. Thus, a country that has granted the right to use of biological programs peacefully should not to be arbitrary or exploited this right in illegal operations that will violate the provisions of international law. .

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