



## BIOTERRORISM: AN OVERVIEW

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### Abstract

The release of toxins, bacteria, and various harmful agents released in the environment with the sole intent of causing harm, illness or death among humans, animals or plants is a bioterrorism attack. All these agents causing death or illness among humans, animals are found in the nature. To increase the severity of the attack these agents are mutated or altered. This is done to increase its resistance against current medicines or altered to spread it in the environment. Bioterrorism is a strategic area, where there is a legal lacuna. In this review, Bioterrorism in India, related laws and role of U.N is focussed. India armed with the Terrorism act condemns the act of terrorism but it does not elaborate on bioterrorism. Prevalence of effective laws can play an important role to reduce such attacks. It will also create more fear in the minds of the perpetrators. Collective international efforts to curb such attacks at a global level are required to make the world free from the risk of bioterrorism.

### Introduction

“Terror is often inflicted upon the weaker sections of the society at the most unexpected place and time.”

Terrorism has made its way into the world as one of those issues which requires international attention. Terrorism is the use of weapons and violent means against civilians for political aims by inflicting

terror within people. Terrorism has no geographic limitations. The world has witnessed terrorism every now and then, be it, 26/11 Mumbai Attack, 9/11 US terrorism attack or the bombings in regions like Syria. However, the world has increased its capability of dealing with these terrorist attacks. But it has ignored bio-terrorism which is not a popular use of terror and chaos. Bio-terrorism has a strong potential as a threat in the near future. This form of terrorism is the use of biological agents like influenza virus, anthrax, bacteria among many other agents that are able to create community disruption, chaos and inflict terror among the society. Bioterrorism is also capable of mass destruction as evident from the fact that Spanish flu killed more than those killed in the World War 1. “Bill Gates in one of his speeches stated that he is afraid of bioterrorism as the world is not prepared for one such attack if executed properly.”<sup>1</sup> The world does not have the medical preparedness nor the proper execution or readiness of the medical team. He further suggested that in order to be prepared, the medical team should work in co-ordination with the military. Before we begin to study why the biological weapons are a potential threat, let’s examine one such past biological outbreak to understand what this potential threat really is.

### Spanish Flu

<sup>1</sup>Sarah Knapton, Bill Gates: Terrorists could wipe out 30 million people by weaponising a disease such as smallpox, The Telegraph (March 26, 2018, 12:21 AM), <https://www.telegraph.co.uk/science/2017/04/19/bill-gates-terrorists-could-wipe-30-million-people-weaponising/>.



“The Spanish Flu was one of the greatest epidemic in the history as it killed around 20 – 50 million people. Approximately half a billion people were infected with the flu. It killed more people than the World War I which killed around 18 – 20 million people. The Spanish Flu got its nickname from the fact that Spain was hit the hardest from this flu. It is also known as “La Grippe” and lasted around a year from 1918 – 1919. Around 6, 75,000 Americans died of this influenza epidemic which was ten times more powerful than the World War 1. During this epidemic, people were asked to wear masks and the public places were shut down. The Spanish Flu spread throughout the globe but the main areas initially affected were North America, Europe, Africa and Asia. The mortality rate was extremely high in India at around 50 deaths from influenza per 1,000 brown people. One of the ironical facts about this flu was that it primarily affected people between the age group of 20 to 40 years old.

There have been many hypotheses regarding how this flu must have originated or how this flu grew so rapidly. Many people believed of this epidemic as a biological warfare tool of the Germans. A study found that places where humidity was more had been severely affected as humidity provides dissemination of bacteria.”<sup>2</sup>

### Research conducted in late 2000s

“In 2008, researchers found out what made this flu so deadly apart from lack of medical preparedness, the virus consisted of three

genes which weakened the victim’s bronchial tubes and lungs that paved the way for pneumonia.”<sup>3</sup> There have been many biological outbreaks since then but none of them have been that serious.

### Is the manufacture of bio weapons dangerous?

Integrating biological pathogens and manufacturing bioweapons is a dangerous activity. To cite an example let us take anthrax. The biological agent used is *Bacillus anthracis* and in order to infect a person approximately 8,000 to 50,000 bacteria are required. Hence, it would be appropriate to say that bioterrorism surely could prove to be a tool for bio terrorist attacks in the near future.

### Evidences for Bioterrorism

- Historically the use of biological weapons includes those practiced in the middle ages when diseased carcasses and bodies were catapulted over enemy walls. It was done to induce sickness in humans or animals in Europe.
- The Siege of Caffa in 1346: It is one of the first bioterror attacks recorded where plague was used to make the inhabitants of city Caffa ill.
- French and the Indian war: This is also known as the seven year war from 1756 – 1763. In this war it is reported that the British had supplied Indians with small pox infected blankets.

<sup>2</sup>Molly Billings, The Influenza Pandemic of 1918, Stanford (Mar. 27, 2018, 11:34 AM), <https://virus.stanford.edu/uda/>.

<sup>3</sup>History.com Staff, Spanish Flu, History TV (Mar. 27, 2018, 6:11 PM), <https://www.history.com/topics/1918-flu-pandemic>.



- During the Indo – Pakistan war in 1965 the scrub typhus outbreak came under notice. This is caused by *Orientiatsutsugamushi*. The soldiers who were affected in this war were characterized with constant coughing, headache, fever and breathlessness.
- During the Gulf war in 1995, it is reported that Iraq started producing bombs and rockets containing *Bacillus anthracis* and botulinum toxin. These are bio warfare agents.
- Both the world wars I and II have indicated that bio weapons have been used i.e. use of anthrax, cholera, shigella and so on. Various mysterious outbreaks of plague have been observed in the Indian States of Gujarat and Maharashtra (1994). The government even had no idea how such plague spread through these states. There was also no idea how it originated. It was however reported to be pneumonic plague. The government declared international public health emergency.
- From the above it is clear that history has sufficient evidences that bio weapons have been used to spread terror and kill thousands of people.

#### **Bioterrorism Agent's classification system**

The agents of bioterrorism can be classified under three main categories specifically – Priority category A, priority category B and priority category C. These are classified according to the potential highest risk impacts it has on individuals.

- Category A: They include organisms that can be disseminated easily. It spreads from one person to another very quickly. They are the highest priority agents.

Some examples include plague, small pox, anthrax, *Bacillus anthracis* etc. They have potential high health risk impact and can cause high mortality. It can create public panic and social disruption.

- Category B: They are comparatively easy to disseminate. They have lower mortality rates and cause moderate morbidity. Some examples include *Brucella* species, *Salmonella* species etc.
- Category C: These agents include pathogens that might be used in such way for mass dissemination because of its easy availability, easy production, high mortality rates and further its ability to cause major health effects. Some examples include Hantavirus and Nipah virus.

#### **Bioterrorism and Bio warfare**

“Biological Warfare is the usage of biological weapons for the purpose of wars. It is generally used against the military. It targets the homogenous population of the fit and healthy. They include adults who have undergone pre-attack vaccinations. The use of these weapons in biological warfare is on the field so the timings of the attack are known and response to these attacks is available depending on the type of biological agents used. The main aim of these types of attacks is to disrupt the enemy forces or to cause mass destructions.

While on the other hand, bioterrorism is the usage of biological weapons to cause terror, chaos and disruption of community. The targets for these attacks are heterogeneous civilian population of elders, adults, children and the immuno-compromised. Unlike bio warfare, since the targets are civilians in a local area, there is no pre attack vaccination and the detection of the attack may not even



be possible as they are very difficult to trace the illness and might take time from several hours to weeks depending on the agent. In bioterrorism, mass casualties may not be a necessity to have a successful attack.”<sup>4</sup>

### What is more dangerous: Bio warfare or Bioterrorism?

Bioterrorism can be considered to be more dangerous as stated below:

**Usage:** Bioterrorism is used on the civilians who are not prepared beforehand for such attacks which can cause dissemination of the virus among other civilians from those infected while on the other hand, bio warfare is referred to use of bioweapons on the military which often comes prepared with pre attack vaccines and limits the effect of these weapons. So, Bioterrorism, in this regards is more harmful.

**Timing:** Bioterrorism is more harmful in terms of timing as the time and place of attack in bio warfare is known while in a bioterrorist attack, the place could be anywhere and it may take time to trace the attack from several hours to weeks depending on the agents used.

**Aim:** bioterrorism aims to create chaos and terror among people which may not be the case in bio warfare the aim is to disrupt the enemy forces.

### Bioterrorism in India

- With hostile neighbouring countries like Pakistan and China- there is always a possibility of a bio threat. The need for

India is to have strong regulations to handle such situations. The problem of bioterrorism has not been highlighted by the laws of the country. It has only found a passing mention in P.O.T.A – Prevention of Terrorism Act, 2002.

- “Article (3)a of P.O.T.A states – “Whoever with intent to threaten the unity, integrity, security or sovereignty of India or to strike terror in the people or any section of the people does any act or thing by using bombs, dynamite or other explosive substances or inflammable substances or firearms or other lethal weapons or poisons or noxious gases or other chemicals or by any other substances (whether biological or otherwise) of a hazardous nature or by any other means whatsoever, in such a manner as to cause, or likely to cause, death of, or injuries to any person or persons or loss of, or damage to, or destruction of, property or disruption of any supplies or services essential to the life of the community or causes damage or destruction of any property or equipment used or intended to be used for the defence of India or in connection with any other purposes of the Government of India, any State Government or any of their agencies, or detains any person and threatens to kill or injure such person in order to compel the Government or any other person to do or abstain from doing any act.
- Article 4 – specifically mentions where an individual is unauthorised to use arms, bombs, dynamite or any hazardous substance which capable of mass biological destruction or any such threat to life of humans would be guilty under terrorist act. The prison sentence may be life-long with a fine extending up to 10

<sup>4</sup> ML Grayson, The difference between biological warfare and bioterrorism: Australia finally makes a start towards real preparedness for bioterrorism, 33 IMJ 213-214 (2003).



lakh rupees. These are only the two instances where there has been some specific mention of bioterrorism but are inadequate.”<sup>5</sup>

- Advances in the bio – tech sector of our country has made possible bio terrorism threats even more possible. The terrorist organizations like Al Qaeda, Lashkar-e-Taiba etc. have their bases well established in India. The impact of a bioterrorism attack in India can be massive even if there is a accidental release of any bio hazard it would have large number of people killed. Hence new laws need to be established with regard to bioterrorism. The P.O.T.A needs to be updated and more stringent laws need to be made applicable on such crimes.
- There have been various cases of bioterrorism in India and various countries. We need to learn from these foreign countries about the required legal regulations. Bioterrorism is a trending act of terror and to conquer it we must act now and work towards a change.

### Role of United Nations

- United Nations over the years has become such an organization which governs and makes laws, regulations so that world peace is maintained. Being of such primary importance, it has played a great role in reducing bioterrorism from time to time by initiating various treaties and keeping a check on other countries.

- The Geneva protocol 1925 was adopted by international conference on control of international trade in arms and implements of war as governed by the League of Nations, where many countries met and decided to prohibit the use in the war of poisonous gases, analogous liquid. All states agreed to prohibition and not to use them in first place.
- B.W.C – Biological Weapons Convention came into force on 26<sup>th</sup> March 1975. The United Nations came up with its idea to disarmament treaty of banning the production, development and stockpiling of weapons of mass destruction. The second conference held in 1986 agreed to confidence building measures to particularly reduce doubts or suspicions and make an international friendly relation. In the third conference in 1991 to make the C.B.M (confidence building measure) much stronger a group of governmental experts had been established to take into the matter of bioterrorism. “At a Special Conference in September 1994, the States parties agreed to establish the Ad Hoc Group of the States parties to the BWC in order to negotiate and develop a legally-binding verification regime for the Convention”.<sup>6</sup>
- In the 1996 and 2001 conference the Ad hoc group had to intensify its work but it was unable to draft legal instrument (protocol).
- Finally in 2006 the United Nations General Assembly adopted – UN global counter terrorism strategy which aimed at

<sup>5</sup> The Prevention of Terrorism Act 2002, Punishments for and measures for dealing with terrorist activities, P.O.T.A 2002, (26 March 2018, 16:54), <http://www.satp.org/satporgrp/countries/india/document/actandordinances/pota.htm>.

<sup>6</sup> United Nations Office for Disarmament Affairs, Biological Weapons, (26 March 2018, 16:54), <https://www.un.org/disarmament/wmd/bio/>.



a four pillar strategy. To ensure ultimate human rights and law. It is reviewed every two years and further changes are made if required with the assent of the member of U.N.

- The four pillar strategy –They include: Addressing the conditions conducive to the spread of terrorism. Measures to prevent and combat terrorism. Measures to build states’ capacity to prevent and combat terrorism and to strengthen the role of United Nations system in that regard. Measures to ensure respect for human rights for all and the rule of law as the fundamental basis for the fight against terrorism<sup>7</sup>.
- The United Nations has played a pivotal role in making the world realise the importance of peace and to establish a healthy relation. It has made its efforts to make more laws, treaties for the international peace and security.
- With the advent of technology and rapid development in science and the biological sector the United Nations has framed its rules and regulations whereby the countries a know their boundaries and limits.
- Bioterrorism is a very serious problem and the combat such problem all the countries need to cooperate and work together as one towards establishing peace and eliminating terrorism.

### Future of Bioterrorism

In a world full of threats of war of all kinds be it nuclear war, war on terrorism, poverty or even global warming, there is one

potential war using biological weapons coming up in future which is often ignored and if executed with precision could lead to the death of millions.

“These agents of biological nature are not just small in nature but deadlier than other forms of terrorism if executed properly as there is not much medical preparedness for a large scale outbreak. This is one of the issues that need to be addressed. Advanced weaponries and technologies which can prevent wars on large scales to an extent today exist but it lacks behind in the biological wars where the medical preparedness or facilities to handle the situation are lacking. The biotechnology industry has expanded significantly and these weapons can be made very easily as they are found in nature and are inexpensive. The attacks of terrorism by armed weapons and bombings are far more complex than this form of terrorism which makes it a reason of possibility of a new approach for producing terror amongst all these transnational terrorist groups. The increased use of biological weapons for terrorism is because they are very difficult to trace the illness and make take time from several hours to weeks depending on the type of agent. Bioterrorism is a potential threat in the present scenario. For a large scale bioterrorism attack effective biological agents are required to cause damage. The procurement of such pathogens may be difficult. Experts warn that bioterrorism attacks are deadly weapons that terrorists can use for mass destruction.”<sup>8</sup>

<sup>7</sup> United Nations Office for Disarmament Affairs, Biological Weapons, (26 March 2018, 16:54) <https://www.un.org/disarmament/wmd/bio/>.

<sup>8</sup> Ingun Arnold, How Much of a Threat is Bioterrorism? , DuetscheWelle(Mar.25,2018,1:11PM), <http://www.dw.com/en/how-much-of-a-threat-is-bioterrorism/a-1505273>.



**Conclusion**

This issue of bioterrorism has been ignored for a long time and this ignorance can prove to be detrimental to not just a nation but to the entire world if appropriate steps or measures are not taken. Bioterrorism is capable of far more potential than it portrays and with the technological advancement, expansion of biological labs, possibilities of using biological weapons by the terrorists has increased more than ever in today's world. It is suggested that a strong institutional and legal framework be established to deal with the special issues relating to bio-terrorism.

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