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Weapon of Mass Destruction – A Grave Threat to Global Security

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Abstract:
Weapon of mass destruction (WMD) is surely and certainly one of the major threat for global security. It includes nuclear, chemical and biological weapons which have huge potential to kill or eliminate large number of people. The proliferation of weapons of mass destruction is hugely involved with highly modern technologies. In spite of several restrictions with disarmament treaties, several countries and terrorist possess for it. This man made man threat is really very difficult to predict and combat. Several countries like – Iran, Syria, Libya etc. are highly concern issue for WMD threat. Can we really call for a farewell of WMD or is it simply impossible?

Keywords: *Weapon of mass destruction, global security, nuclear weapons, chemical weapons, biological weapons, proliferation, disarmament.*

1. Defining the term WMD

The official discourse to the language of 'mass destruction' can be traced back at least as far as a November 1945 communique´ from a meeting between US President Harry Truman, British Prime Minister Clement Attlee, and Canadian Prime Minister Mackenzie King.[1]The three leaders favoured 'eliminating from national armaments atomic weapons and all other major weapons adaptable to mass destruction'.[2] Weapons of mass destruction (WMD) includes nuclear, radiological, chemical and biological weapons. These are not same as conventional weapons, rather they have enormous potential lethality to kill large number of people. When deploy of ballistic missiles, they can potentially be fired from the home territory of one state and wreak great destruction on the home territory of another state.[3]In W. Seth Carus's work, we can trace over forty different definitions of WMD which can be fitted in six categories –

- WMD as nuclear, biological, and chemical (NBC) weapons.
- WMD as chemical, biological, radiological, or nuclear (CBRN) weapons.
- WMD as CBRN and high explosive (CBRNE) weapons.
- WMD as CBRN weapons that cause massive destruction or kill large numbers of people.
- WMD as weapons that cause massive destruction or kill large numbers of people, and do not necessarily include or exclude CBRN weapons.
- WMD as weapons of mass destruction or effect, potentially including CBRNE weapons and other means of causing massive disruption, such as cyber-attacks.[4]

2. What is the WMD Threat?

In perspective of global security, it is based on two major dominant theoretical paradigms – Traditional security approach or state centric approach, which gained attention in post 9/11 world and Non-traditional security approach or human centric approach, which is concern about the societal crisis. Generally the WMD comes under the state centric approach. The presence of WMD is obviously a grave threat to global peace, security as well as global economy. It serves different purposes from conventional weapons and with a few exceptions, their main motive is to deter attack by giving state leaders the means to inflict great pain against a would-be destroyer or conqueror.[5] With the advancement in rapid technology transfer and science, the new avenues of proliferation are opening for

[1]Christian Enemark, 'Farewell to WMD: The Language and Science of Mass Destruction', Contemporary Security Policy, 2011, available at http://dx.doi.org/10.1080/13523260.2011.590362, (accessed on 25th August, 2015).
[2]William Safire, 'On Language; Weapons of Mass Destruction', New York Times Magazine, 19 April 1998, p. 22.
[3]Joshua S. Goldstein and Jon C. Pevehouse, 'Military Force and Terrorism', in International Relations (Pearson; 10 edition, 2013), p. 209.
[4] W. Seth Carus, 'Defining 'Weapons of Mass Destruction' '', (Washington, D.C.: National Defense University Press, 2012), p. 36.
[5]Joshua S. Goldstein and Jon C. Pevehouse, 'Military Force and Terrorism', in International Relations (Pearson; 10 edition, 2013), p. 209.

nations and terrorist groups. The continuing possibility of terrorist attacks by using nuclear, chemical or biological weapons is an ongoing and major concern in the national and global security policy arena. Though terrorist organizations are likely undertake conventional weapons over WMD but The Central Intelligence Agency warns that the Al-Qaeda network has made obtaining WMD capability a very high priority.[6]The Obama administration's 2010 National Security Strategy included the statement: 'The gravest danger to the American people and global security continues to come from weapons of mass destruction, particularly nuclear weapons'.[7]

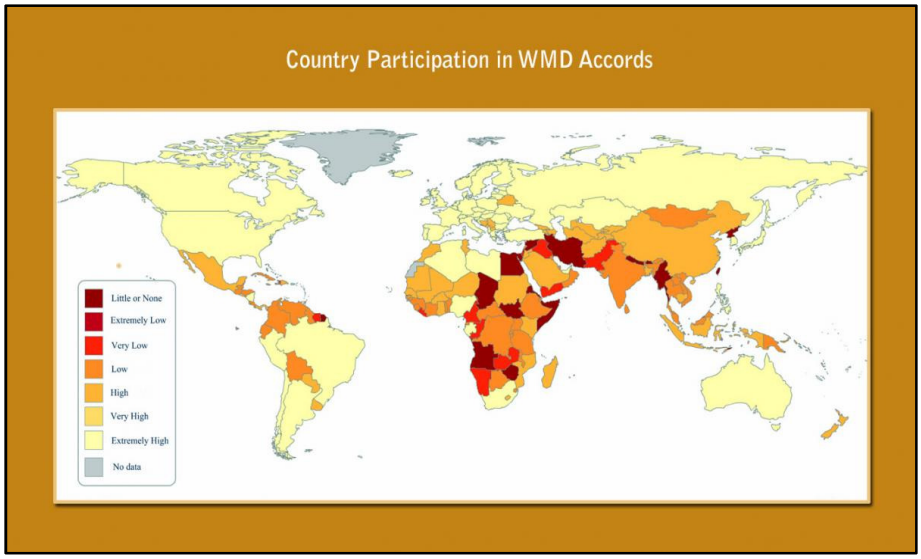

Figure 1: Country Participation in WMD Accords

Nuclear weapons are the world's most destructive weapons. A single weapon the size of a washing machine is enough to destroy a city. There are two types of nuclear weapon: fission weapons (atomic bombs or A-bombs) are less expensive and fusion weapons (thermonuclear bombs, hydrogen bombs or H-bombs). Fission weapons were invented sixty years ago in secret World War II science program by U.S scientists known as Manhattan Project. The nuclear weapon was firstly used on Hiroshima and Nagasaki, two Japanese cities in 1945. But in 1954, the Bravo H-bomb on Bikini Atoll was the largest U.S above ground nuclear test. It was over a thousand times more powerful than that the bomb dropped in Japan. The effects of the nuclear weapons include not just only the blast of the explosion, but also heat and radiation. While heat can potentially create self-sustaining firestorm in a city. On the other hand radiation creates radiation sickness that can kill people in few days or create long term health diseases like cancer. It can also create an electromagnetic pulse (EMP) that can damage and destroy electronic equipment.[8]The delivery system is for getting nuclear weapons to their targets. During the Cold War nuclear delivery systems were divided into two categories – Strategic weapons, which usually a long range that could hit an enemy's homeland and another one is Tactical weapons, it is used in battlefield. The main strategic delivery vehicles are powerful ballistic missiles. Both super powers made intercontinental ballistic missiles (ICBMs –range more than 5,000 miles). Today short range ballistic missiles (SRBMs – used by Iraq during the Gulf War, range of 1,000 miles) are very difficult to defend against.[9]The cruise missile is a very new technology centric which can easily be controlled and launched by satellite guidance (U.S.A used against Iraq in 2003, Serbia in 1999 and Iraq in 2003). These ballistic missiles are very difficult to control. Through the Missile Technology Control Regime, industrialised states are trying their best to limit the flow but success stories are rare.

Nowadays because of technological growth, nuclear weapons can be easily smuggled into a target states by diplomatic pouches, speedboat, car etc. Since, 2001, the United States run a container security initiative to prevent mass destruction weapons reaching U.S shores in seaborne shipping container[10].

Chemical weapons, as name suggests, releases chemical that either kill people or disable them. These weapons are cheap and can be produced very easily. In war, the use of chemical weapons are hardly been seen. Mustard gas and chlorine gas blinded and killed thousands of civilians and soldiers in World War I. Then it was in banned in Geneva protocol, held in 1925, but still in effect today. Since then in 1980s only Iraq violated the treaty against Iran. During the cold war both United States and the Soviet Union maintained

[6]Steve Bowman, 'Weapons of Mass Destruction: The Terrorist Threat' *CRS Report for Congress*, March 7, 2002, available at http://fas.org/irp/crs/RL31332.pdf(accessed on 26th August, 2015).

[7]Christian Enemark, 'Farewell to WMD: The Language and Science of Mass Destruction', Contemporary Security Policy, 2011, http://dx.doi.org/10.1080/13523260.2011.590362, (accessed on 25th August, 2015).

[8]Joshua S. Goldstein and Jon C. Pevehouse, 'Military Force and Terrorism', in International Relations (Pearson; 10 edition, 2013), p. 211.

[9] Ibid, p. 212.

[10]Ibid, p. 213.

a large number of arsenals of chemical weapons. In the year 1992, Chemical Weapons Convention banned possession and production of chemical weapons. It was signed by all great powers (with the exceptions including Egypt, North Korea and Syria). According to a 1993 report by the US Office of Technology Assessment (OTA) entitled Proliferation of Weapons of Mass Destruction: Assessing the Risks, 'chemical weapons must be delivered in great quantities to approach the potential lethality of nuclear and biological weapons'.[11]But still many nonparticipants are there in new treaty and several states (including India, China, South Korea, Britain and France) admitted to having secret of chemical weapons programs. Several times these weapons are used on civilians like –Iraq government against Iraqi Kurds in 1980s, the Ghouta chemical attack (sarin nerve gas) on Syria in 2013, truck bomb with chlorine-filled tanks used against troops by the Islamic State militants in this year.

Biological weapons resembles chemical weapons that intentionally spread disease upon an enemy or population. Over 20 toxins & diseases, such as smallpox or anthrax could be used as weapons. In 1972, Biological Weapons Convention banned the development, possession and production of biological weapons. It was signed by the great powers including more over 100 countries. However, the treaty made no provision for inspection and it is quite easy to hide. So, several state remain under suspicion of having hidden biological weapons. Today United States and other countries maintain their biological research which is not banned by the treaty. Past examples of using biological weapons are –mass suicide by cult members in Guyana (1978), poisoning of food at high school in China (2002), 20 gas attacks on girls' schools in Afghanistan (2010) etc.[12]

3. Proliferation

Proliferation is the spread of weapons of mass destruction. The implications of this proliferation for international relations are difficult to predict. It could occur simply with

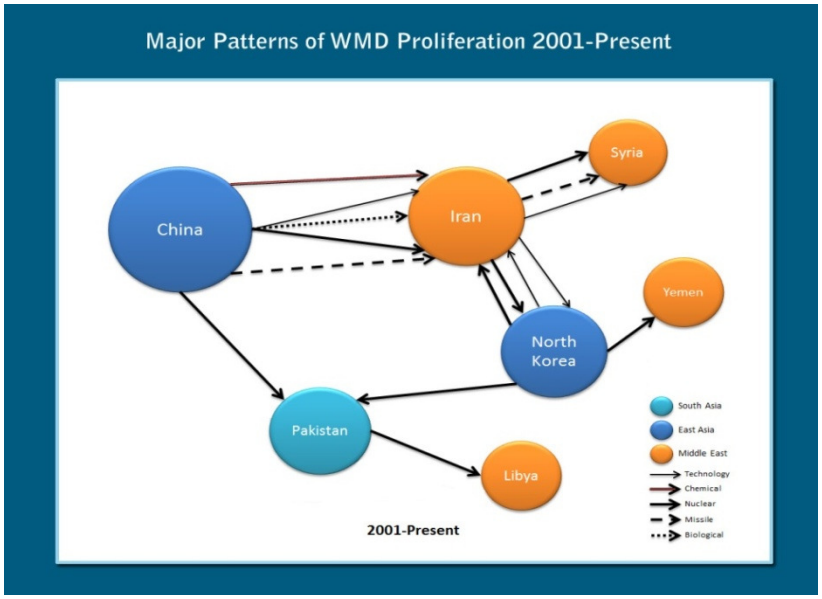

Figure 2: Major Patterns of WMD Proliferation 2001-Present

buying (or stealing) by a state or non-state actors. After 2013, the Syrian government and rebel forces accused each other of discharging a deadly chemical and North Korea's announcement to restart the nuclear reactor, weapons of mass destruction are back in the news raising fresh fears of proliferation and its use. The threat from nuclear, chemical and biological weapons are hanging over the globe.WMD proliferation usually focuses on technology and materials like precursor chemicals, biological agents, toxins and uranium. Yet delivery devices, projectile weapons, launch platforms and guidance systems are essential components.[13]

4. Combating WMD

Six conventions, two treaties, one protocol, one regime, one arrangement, one code, one initiative and ten regional or zone treaties have been instituted since 1925 to control these instruments of mass murder.[14]Nuclear Strategy refers to the decisions about how many nuclear weapons should be deployed or what delivery system should use to put them on and what policies to adopt for their uses. Defence has played smaller role in nuclear strategy because no effective defence against ballistic missile attack has been devised.

[11]Christian Enemark, 'Farewell to WMD: The Language and Science of Mass Destruction', Contemporary Security Policy, 2011, http://dx.doi.org/10.1080/13523260.2011.590362, available at (accessed on 27th August, 2015), p. 387.

[12]Wm. Robert Johnston, 'Summary of historical attacks using chemical or biological weapons', available at http://www.johnstonsarchive.net/terrorism/chembioattacks.html(accessed on 27th August, 2015).

[13]Carol E. B. Choksy and Jamsheed K. Choksy, 'WMD Proliferation Threatens the World', available at http://yaleglobal.yale.edu/content/wmd-proliferation-threatens-world(accessed on 29th August, 2015).

[14] Ibid.

Though U.S spending billions of dollars to make it successful one, the name of the program is Strategic Defence Initiative (SDI), "Star Wars", or Ballistic Missiles Defence (BMD). According to Morganthan disarmament refers to both the concept of limiting or reducing and abolishing weapons. It is generally refers to a country's military or specific type of weaponry. It is often taken to mean the total abolition of weapons of mass destruction. Many scholars, diplomats and state leaders have pointed out that if the World War III takes place then because of the excessive growth of WMD, no doubt that human civilisation can be ended. The competitions among nuclear proliferation is also linked with political and global tensions. Many treaties (see Table 1) have singed and played important role for disarmament.

Multiple Disarmament Treaties
1946 --- Atomic Energy Commission (Baruch Plan)
1957 --- Atoms for Peach Treaty (APT), International Atomic Energy Agency (IAER) was formed.
1963 --- Partial Test Ban Treaty (PTBT)
1968 --- Nuclear Non-Proliferation Treaty (NPT)
1972 --- Sea Bed Treaty, Anti-Ballistic Missiles (ABM) treaty and Strategic Arms Limitation Talk (SALT-I)
1978 --- Threshold Test Ban Treaty
1979 --- Strategic Arms Limitation Talk (SALT-II)
1989 --- The INF treaty
1991 --- Strategic Arms Reduction Treaty (START-I)
1996 --- Comprehensive Nuclear-Test-Ban Treaty (CTBT)
2002 --- Strategic Offensive Reductions Treaty (SORT)
2009 --- New START Treaty

Table 1: (Multiple Disarmament Treaties)

Weapons that can take a first strike and still strike back give a state second-strike capabilities by both sides is called mutually assured destruction (MAD) because neither side can prevent the other side to destroying it. To limit and control nuclear arsenals Arms control is very crucial step, it is a collective good. Arms races are nothing but represent the dark side of the reciprocity principle. Since 1960s both sides have used this negotiable agreement to control the arms race. In 2010, the U.S and Russian president signed a thick arms control treaty.

5. Farewell to WMDs?

As it has been mentioned that despite of various relevant treaties, there are still countries seeking of possession to weapons of mass destruction. According a paper named "Proliferation of weapons of mass destruction Risks for companies and scientific institutions" – these countries of concern usually seem to be motivated by a perceived imbalance of power in their region, especially where countries in the Middle East, North Africa, South and Southeast Asia are concerned. For example, at certain points in time, the interrelations between Israel, Egypt, Syria, Libya, Iraq and Iran spurred all these countries to engage in the development of weapons of mass destruction.[15]

On the danger of nuclear weapons, Albert Einstein reportedly said: "I do not know with what weapons World War III will be fought, but World War IV will be fought with sticks and stones."[16] Well, that is a crucial statement – if really World War III is being fought then what will happen? Will there be similar pictures like previous world wars? Or more threats of WMD will enter into global security? Being the global hegemony U.S, the Obama administration's 2010 National Security Strategy included the statement: 'The gravest danger to the American people and global security continues to come from weapons of mass destruction, particularly nuclear weapons'.[17]In this paper I have tried to point out the past and present scenario of WMD and as we all know that today, in 2015 the grave threat is WMD but what about the future? The interesting article named 'The Future of Weapons of Mass Destruction' by John Cavesand Seth Carustalked about WMD in 2030. According to them –

"The 21st century strategic environment may require conceptual categories that take the changing nature of weapons and the changing vulnerabilities of societies to new and existing types of weapons into account. Technological trends appear to permit the development of new types of existing forms of WMD that are better targeted, less lethal, and less destructive, which will further complicate our understanding of this category of weapons."[18]

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[15] Anonymous, 'Proliferation of weapons of mass destruction Risks for companies and scientific institutions', available at https://fas.org/irp/world/netherlands/wmdrisks.pdf, (accessed on 29th August, 2015).

[16]Anonymous, 'Disarmament', available at http://www.un.org/en/globalissues/disarmament/ (accessed on 30th August, 2015).

[17]Christian Enemark, 'Farewell to WMD: The Language and Science of Mass Destruction', Contemporary Security Policy, 2011, http://dx.doi.org/10.1080/13523260.2011.590362, available at (accessed on 27th August, 2015), p. 384.

[18]John P. Caves, Jr. and W. Seth Carus, 'The Future of Weapons of Mass Destruction: Their Nature and Role in 2030' (Washington, D.C.: National Defense University Press, 2014), p. 46.

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