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The life and times of Saddam Hussein's cousin Ali Hassan al-Majid, better known as Chemical Ali, who was sentenced and hanged to death, exemplify how rogue ideology and lethal weapons technology can lead to mass destruction in the real life, highlighting the need for ever vigilant action. Efforts towards elimination of all forms of chemical and biological weapons must continue till the last weapon has been dismantled.

The current issue of the magazine looks at the Taliban's attempt to get its hands on the chemical weapons. Dr. Priyanka Singh sheds some light on Chemical Ali's atrocities and Dr. Arvind Kumar analyses the historical evolution of the threats emerging from the weapons of mass destruction.

This issue also features other regular features like Country Profile, Kaleidoscope, Chemical and Biological News and Book Review.

With our readers' feedback, we wish to publish issues in the future that focus on a subject of particular concern.

Contributions and feedback are welcome and can be addressed to: **editorcbw@gmail.com**

Taliban and Weapons of Mass Disruption Threat

Mr. Animesh Roul

The author is a founding member and presently, the executive director of research at the Society for the Study of Peace and Conflict, New Delhi.

Summary

The article analyses the Tehrik-e-Taliban Pakistan's threat of use of chemical weapons inside Pakistan. It looks at the recent such instance of possible low scale use of chemical agents and argues that the recent threat is more of tactical nature.

In Late 2009, the Tehrik-e-Taliban Pakistan (TTP), the radical umbrella terror group operating Pakistan, had threatened to unleash a chemical warfare against Pakistan and planned to use the age old tactics of mass disruption by poisoning Multan, Karachi and Rawalpindi water supplies. According to Pakistan's intelligence agencies, the Taliban presently cornered in their own tribal strongholds, planning to use 'cyanide' and other poisonous chemical substances to the water supply lines in these cities. A faxed threat-letter was received by the Rawalpindi Directorate of Military Lands and Cantonment sometimes in November and as per the letter and other Intel inputs, Taliban has already procured and stockpiled 200 liters of poisonous material that would be used to contaminate water sources and reservoirs under Rawalpindi and Chakla cantonments and perhaps in Karachi. Early in November 2009, Multan administration has directed the concern authorities to stop supplying water to the people from storage tanks after receiving inputs about the Taliban's threat.

In April 2009 Pakistan's North West Front Province (NWFP) police chief Malik Navid told a Pakistan National Assembly's standing committee about Taliban's expertise in making chemical and biological weapons. Navid warned that the Pakistan government needed to urgently focus on containing militancy as it spread from its bases. Navid's testimony also highlighted the merger of al-Qaida and Taliban in AfPak region.

In April-May 2009, Afghan Taliban who have been campaigning against female education of any type, had targeted several girls schools located in north of Kabul in Kapisa and Parwan provinces. These attacks involved poisonous chemical gas and the victims complained of headaches, nausea, vomiting, itching in the eyes. Nearly two hundred students and teachers were affected in these attacks. However, no casualty reported and all of the victims were released shortly after treatment. Though the specific type of gas used remains mysterious it is suspected that Taliban and al Qaeda elements must have experimented with either chlorine or white phosphorus.

- April 26: Over 40 students and teachers were rushed to hospital after a militant suspect lobbed a bottle into the Sadiqi Padshah girl school premise in Charikar town in the Parwan province.
- May 11: Around 60 girl students in another school (Ura Jalili Girls' High School) located in Charikar town (Parwan province) went to the hospital after a similar gas attack with complaints ranging from headaches, dizziness and stinging eyes, with several girls losing consciousness.
- May 12: Chemical gas attack took place at the Qazaaq school in After Bache locality in Mahmud Raqi, capital of Kapisa province. Nearly 130 people were affected, with 98 students and 6 teachers. Many of them were admitted in the local hospital.

Taliban, irrespective of AfPak locations, is not new to this whole war tactics of using weapons of mass disruption, especially chemical and biological weapons. They have Abu Khabab al-Masri's training of chemical and biological weapons handling and the guide book on the CB weapons use against potential targets. Masri (a.k.a Midhat Mursi al-Sayid Umar), believed to have headed al-Qaeda's Weapons of Mass Destruction (WMD) program 'Project al-Zabadi. According to experts and various reports, al-Masri provided Afghanistan Taliban poisons and explosives training in his hideout at Derunta camp, near Jalalabad (Afghanistan). Derunta camp came to limelight when videotapes showing al Qaeda experiments poisoning dogs with chemical weapons surfaced in 2002.

According to al Qaeda observers Masri received his chemical weapons training in the Egyptian army before defecting to the militant Islamic Jihad group founded by Ayman al-Zawahri. The latest threat calls for a recollection of a statement issued by Al Qaeda top leadership. One such statement signed by Mustafa Abu al-Yazeed had warned that al-Masri had "left behind [...] a generation of faithful students who will make you suffer the worst torture and avenge him and his brothers." The CB

weapon threat continues even after Masri's still mysterious death.

Historically speaking, the Afghan Taliban had reportedly received its first supply of chemical weapons during mid 1990s from Pakistan during its battle against then Afghan government. However, there is no concrete evidence to prove these reports.

Now Pakistan security agencies cannot ignore the water poisoning threat as Taliban's Afghan counterpart has already experimented chemical weapons. In what can be termed as scare tactics, TTP now intends to pressurize the Pakistani army to stop military operations in Waziristan. Issuing the water poisoning threats to the Rawalpindi and Chakla Cantonment Boards, it seems they aim to spread panic among the Armed forces presently engaged in the war in the tribal region, clearly sending out a message that their family back home is not safe from Taliban's wrath.

Threats Emanating From Weapons of Mass Destruction

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Summary

The article studies the nature of threats emerging from the weapons of mass destruction and suggests policies for ensuring security against these threats. It argues for widening the attention paid to these weapons to give more focus to chemical and biological weapons.

Introduction

The safety and security of the Weapons of Mass Destruction (WMD), commonly, characterized as nuclear, chemical and biological weapons in the current international security environment has become a dominant area of discussion and debate among the members of strategic and academic community. Such ongoing debates have also highlighted the challenges in the context of the containment of proliferation of WMD. The discourse has mostly centered on the probable threats emanating from the existing stockpiles of WMDs' either by accident or by design. The fear has grown out of proportion among the members of the international community because of the rise of non-state actors. The non-state actors have thrown open new challenges to the various state institutions in overall context of national security dimension of various nation states. It has been estimated that there will always be an attempt by the non-state actors to catch hold of any of the components of WMD and create panic in the society and also create imbalance in the system. How to make the existing non-proliferation regimes robust has been the challenge before the international community.

Unfortunately, most of the discussions about WMDs focus mainly on the nuclear weapons and nuclear fissile materials. It must be reiterated here that while nuclear weapons were invented just 65 years ago, biological weapons have been used for centuries and chemical weapons since World War I. Biological and chemical weapons are as deadly as nuclear weapons except that nuclear weapons have an additional capability of destroying physical infrastructures and locations. Biological and chemical weapons silently would take the lives and it would be really difficult to ascertain the reasons because these are not quickly lethal in comparison to the nuclear weapons.

The United States and Russia together account almost the entire worldwide stockpile of biological and chemical weapons. It would be roughly about 61,000 metric tons.² It should be highlighted here that the available stockpile is

in fact a lethal dose for 65 billion people which is roughly 10 times more than the current global population of 6.5 billion people. This statistics is really scary when one talks about the complete annihilation of human mankind.

Biological Weapons and Threat Perception

It is well known that biological weapons employ viruses, bacteria and other germs to produce diseases, which largely disable human lives and kill people slowly. Biological weapons by and large help in creating imbalance in the ecosystem also because of their impact on both plants and animals. The most likely means of delivering biological agents is through discharging into the atmosphere and it relies on turbulent diffusion and wind currents to dilute and spread the agent over the area being attacked. One may recollect the Bubonic Plague which had swept from Asia to Europe during 14th Century caused roughly 40 millions Asians deaths. The same century had seen many deaths in Europe because of the spread of Plague which continued for generations until the 17th Century. It was used as a weapon in the 1930s and 1940s by the Japanese. They dropped ceramic bombs loaded with Plague infested fleas over several cities in China. The recent scare created by Anthrax in the United States just immediately after September the 11th event in 2001 really signaled to the rest of the world that the non-state actors may like to use bio-agents to fulfill their objectives.

Undoubtedly, Plague is of great concern as a terrorist weapon because it produces disease disproportionately greater than the original amount of agent used. It is found in nature and is available around the world from supply houses in countries without strong security regulations.³ One requires to bring stringent security mechanism at the supply houses so that the bio-agent could not be made easily available.

It should be noted here that the British used smallpox as a weapon during French and Indian War in the mid-eighteenth Century. Under the pretext of friendship, the British had

given blankets from their own smallpox victims to Indians who were sympathetic to the French. The Indians lacked immunity from smallpox and hence suffered a devastating outbreak, which ultimately helped the British to defeat the French at Fort Ticonderoga. The world certainly in the current scenario again has become highly vulnerable from a bio-terrorism perspective. If the historical record about the use of biological weapons at various times is investigated closely, there would be approximately 200 incidents involving toxic biological materials in the last 100 years. It must be emphasized here that the biological weapons are a family of weapons. There are organisms that can attack any part of the living world that mankind depends upon, ranging from Salmonella infections in humans, to foot-and-mouth disease in cows, and Bunt of Wheat in food crops.

There are living and non-living agents. Plague is a classic example of living agent. Bacteria and viruses are the other bio living agents. Botulinum toxin and ricin, on the other hand, are clearly non-living chemicals.⁴ There are also persistent and non-persistent agents. The classic Biological Weapon organism, anthrax, is persistent and hardy. Anthrax can survive in the environment for well over 100 years at the given right conditions. It can also be compared with Venezuelan equine encephalomyelitis, a virus that is non-persistent in the environment. Anthrax spores occur naturally around the world in soil and in certain animals and they can be further produced for biological warfare. The use of anthrax by a terrorist organization in due course has certainly high probability because it does not require much of the infrastructure.

The international community would certainly require taking a serious note of the threats emanating from the bio-agents in the form of the biological warfare. International cooperation is important for information exchange and extraditing bio-terrorists. The revival of the fresh debate on the existing 1975 Biological and Toxic Weapons Convention (BTWC) and its efficacy in the context of the emerging challenge would be of urgent necessity so that there would be an evolution of international consensus on making the existing arrangement robust and stringent. It is really unfortunate

that the BTWC is silent on the verification process. There seems to be a move to have an understanding among the signatories to the convention about the verification procedure and other additional mechanism which would guarantee that such weapon or material do not fall in the wrong hand.

India must develop capabilities in i-forensics for dealing with bioterrorism and biowarfare.⁵ It is the job of international security systems to detect laboratories used for the development of pathogens. Somehow, there seems to be a lack of stringent international mechanism. Under such circumstances, India should put all its efforts in developing a scientifically and legally acceptable system for rapid diagnosis and forensics of pathogenic agents.⁶ Such development would help deter the non-state actors to try and acquire such bio-agents. It is high time, the international community shall work together in making BTWC a robust convention so that the diversion of resources that are globally available in developing biological weapons must not take place.

Chemical Weapons and the Probable Threats

One of the other components of WMD has been the Chemical Weapons. Mustard Gas is one of the earliest chemicals to be weaponised. It was used by both Allies and central powers during World War I. Mustard Gas do not need to be inhaled to be effective. Even skin contact with 0.1 parts per million would produce the desired effective results. Hence, the threat emanating from Chemical Weapons from a terrorism point of view has thrown open many challenges to the international community.

Ricin is a bio-toxin, which is a poisonous chemical that is made from plants or animals. It is made from the waste left over from processing castor beans into castor oil. The various other Chemical Weapons include Sarin, which is a warfare agent and targets the nervous system and inhibits it from functioning properly. Germany pioneered the Sarin during the World War II. It is 26 times as deadly as cyanide gas. Sarin was also used by the terrorist group Aum

Shinrikyo in the Tokyo subway attack during March 1995.⁷

The lethal dose of VX nerve gas can be as little as 10 milligrams. VX is more toxic than Sarin and it is the most deadly of the nerve gases. The United States and Russia possess more than ten lethal doses of biochemical toxin for every human on earth. The challenge before the international community has been to contain the proliferation of chemical weapons. To address this challenge, the Chemical Weapons Convention (CWC) has entered into force and has 184 member countries. The CWC is a multilateral treaty that bans chemical weapons and requires their destruction within a specified period of time. The treaty is of unlimited duration and is far more comprehensive than any prior international agreement on chemical weapons. Two of the major non-signatories to the CWC, North Korea and Syria should be brought under the ambit so that the possibility of diversion of Chemical Weapons to the non-state actors does not exist.

Protection of Nuclear Weapons and Nuclear Materials and Future Threats

The grave danger and the threat to the mankind and the ecosystem in the current international security environment come from nuclear weapons and nuclear materials. The security and protection of nuclear weapons and fissile materials has always been of a great concern for the nuclear weapon states. The possibility of such weapons or materials falling into terrorist hands has grown in the recent years because Pakistan has emerged as the epicenter of terrorism. The close nexus between Taliban and Al-Qaeda in the last one decade have made the situations worst. The challenge before the nuclear weapon states has been to prevent the theft or illegal purchase of fissile material by the non-state actors. It must be stressed here that the nuclear terrorism must be controlled at the source.

There might have been repeated attempts by the Al Qaeda to acquire nuclear material. It is plausible that a sophisticated terrorist

group could build at least a crude nuclear explosive. The amounts needed to build a bomb are small. But, one would require a dedicated infrastructure. The greatest fear is that a worker at a nuclear facility could be bought by the Al Qaeda and help in providing with the small amount of fissile material.⁸ It is most likely that the plausible terrorist attack could come in the form of a “dirty bomb”.⁹ The threats emanating from the nuclear weapons and nuclear material would certainly be an economic and a humanitarian disaster. There seems to be some seriousness and recognition that nuclear terrorism is imminent and hence, there is a renewed debate on global nuclear disarmament. The complete elimination of nuclear weapons will not be the only answer unless and until one assures the protection and security of fissile materials. The dismantlement of nuclear warheads would release lots of fissile materials.

The international community has to work together with the genuine support from the nuclear weapon states in terms of guaranteeing a safer and peaceful world. There is certainly no doubt, biological weapons are of the greatest concern to the mankind in the contemporary world among all the components of weapons of mass destruction. The BTWC requires a stringent verification mechanism. With regard to Chemical Weapons, the stipulated goal enshrined in the CWC has not been achieved so far. The CWC prohibited the development, production and stockpiling of chemical weapons and the signatories were supposed to destroy their existing stockpiles by 2007. Unfortunately, it had not been able to keep the time limit and the movement towards achieving the target has not picked up. The current debate on nuclear weapon free world has to take a proper and serious shape and the commitment has to mostly come from the United States and Russia. The threat is real and unless and until adequate measures are taken on time, the possibility of getting hold of fissile materials in the wrong hands can never be ruled out.

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2. US Centres for Disease Control and Prevention, “The History of Bioterrorism”, <http://www.bt.cdc.gov/training/historyofbt/index.asp>, 28 January 2010.
3. According to the Journal of the American Medical Association, “Botulinum toxin is the most poisonous substance known. A single gram evenly dispersed and inhaled could kill more than 1 million people.
4. The convergence of information security and criminal justice is called i-forensics. Such forensic is totally different from ordinary forensics and India must start from scratch in this area.
5. Recent developments in molecular biology, including genomics and proteomics would make this a real possibility. The recent work on SARS (Severe Acute Respiratory Syndrome) has demonstrated the efficacy of a microarray system in the rapid diagnosis of the virus and its recognition as a novel virus within a very short time frame.
6. The attack killed 12 people and injured 6,000 others.
7. There have been multiple documented cases of real theft of kilogram quantities of real weapons-usable nuclear material. The International Atomic Energy Agency has a database that includes roughly 20 incidents involving seizure of stolen Highly Enriched Uranium (HEU) or plutonium that have been confirmed by the relevant states.
8. A dirty bomb generates its explosive force from conventional explosives like Tri Nitro Toluene (TNT) rather than by nuclear fission or fusion. It is far less powerful but it is packed in deadly radioactive material.

End of Al Majid 'Chemical' Ali

Dr. Priyanka Singh

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Summary

The execution of Chemical Ali might enliven the debate on chemical warfare. It should inspire the global community to revisit the threat from chemical weapons and renew cooperation to ensure chemical agents remain inaccessible to the non state actors like the al Qaeda and the Taliban. These militant groups are irresponsible and are forever looking for ways and means to induce maximum damage to innocent lives across the globe.

International focus was repositioned back to Iraq as Saddam Hussein's cousin Ali Hassan al-Majid was sentenced and eventually hanged to death in Baghdad on January 25, 2010. Commonly known as 'Chemical Ali', Majid was implicated in atrocious war crimes and had been sentenced to death on four occasions since 2007. He bore a striking resemblance to the former Iraqi President Saddam Hussein. Majid Ali is also referred as the 'butcher of the Kurds' in some places due to his pivotal role in the genocide against the Kurd ethnic group.

Majid was serving as the head of the southern region in March 2003 when US launched the military offensive in Iraq. In April of the same year he was reported killed in an air strike according to British authorities. Even as US Defence Secretary, Donald Rumsfeld admitted Ali's status was unknown, he was captured alive by US forces a couple of month later. His name figured at the fifth place in the US most wanted list amongst the former Iraqi officials. His capture was celebrated equally by the soldiers of the CENTCOM and the Iraqis.

Majid's political career took off as the governor of the Northern Province in March 1987. Ali was also the head of the Northern Bureau of Saddam's Baath Party. In this capacity he went on to sign a decree on June 3, 1987 which ordered indiscriminate killing of Kurds by employing chemical weapons. With the invasion of Kuwait, Majid changed his position in the North and became the governor of the occupied territory which the Iraqi state referred as 'Iraq's nineteenth governorate.' Later on he went to take up the offices of the Minister of Interior and served a four year stint as the Minister of Defence. He was an important figure within the Baath Party being a member of the Ruling Revolution Command Council and the leader of the party in Salah-al-Din governorate.

Majid Ali exercised influence even within the family of Saddam Hussein. His nephews were married to Saddam's daughters. When they revolted against Saddam Hussein, Majid Ali being a trusted henchman of Saddam ordered the execution of the nephews with their father who incidentally was his real brother. This incident

known as the 'Jihadi offensive' underlines his loyalty to Saddam Hussein. Majid shifted back to the strategically important Kuwait border in 1998, a location held by him during the 2003 US offensive.

Majid or Chemical Ali was sentenced to death for four offences. In 2007, he was given a death penalty for formulating and executing the Anfal campaign; in 2008 for crushing the Shia movement in the wake of the 1991 Gulf War ; in March 2009 for Shia killings in Sadr district in Baghdad and finally in 2010 for the Halabja massacre. Two other officials from the Baath Party were also sentenced in the Halabja case. The Kurds in Iraq and the Iranians had a valid reason to celebrate the execution of Majid Ali. He was behind one of the most heinous act committed against humanity- the 'al Anfal campaign' or the genocide against Kurds during the days of Iran-Iraq war in 1988.

Chemical Ali was the principal architect and executor of the al Anfal campaign launched largely against the Kurd population in Iraq. The ethnic cleansing of directed against Kurds was envisaged by the Iraqi government as a counter insurgency to deal with guerrilla fighters. The Iraqi government meant to punish the Kurds for aligning with the enemy, Iran. The al Anfal campaign or "the Spoils" was designed to eliminate the Kurds; mainly men aged between 15-70 to avert the possibility of their becoming guerilla fighters against the Iraqi state as stated - "It is apparent that a principal purpose of Anfal was to exterminate all adult males of military service age captured in rural Iraqi Kurdistan"¹ where chemical weapons were used extensively.

The campaign was launched in February 1988 when the Iraqi forces marched towards the headquarters of the Patriotic Union of Kurdistan (PUK) at Sergalou- Bergalou, headed by the current president of Iraq, Jalal Talabani. Halabja located about 150 miles from Baghdad was captured by Kurdish forces with alleged help from the Iranian Revolutionary Guards. It was an attempt from the Kurdish forces to reclaim the headquarters seized by the Iraqi forces. As a result, the town of Halabja was attacked in March 1988. At least 5000 people

died in Halabja when several aircrafts released poisonous mustard gas- a blister agent and nerve agents such as sarin, tabun and VX. Clouds in white, black and yellow surrounded the town. Only few could manage to escape the effect by putting wet cloth to cover their faces. Survivors say at the first instant, the poisonous gas smelt of a sweet apple.

The use of chemical weapons had an indelible impact on the targeted population in Halabja, most of whom were women and children- some died instantly while others developed fatal diseases. There were respiratory and visual complications amongst the survivors. The surroundings were badly affected and so were the water supply and the animals. The incident forced majority of the Kurds to flee the area in search of safe destinations. Later the Iraqi forces cleared the area by dumping dead bodies in mass graves and conducted survey of the area to assess the impact of the chemical weapons.

Iraq's chemical weapon programme dates back to the 1980's- much before the Operation Desert Storm in 1991 launched by US against Iraq's occupation of Kuwait. During the 1980's, Iraq played a regional ally to US in its quest against Iran. International dynamics underwent a complete change in the beginning of the 1990's and former allies became enemies in the Gulf War.

Ironically, the international community, especially the United States, did not do much apart from blaming Iran for the Halabja massacre. Thousands of innocent lives lost in the attack failed to persuade US and Britain to review its ties with Iraq and take strong measures against the Iraqi state. It was only during the ensuing years that the US and its allies realized Iraq's WMD stockpiles posed a blatant threat to global security. In fact, the moral ground to attack the tyrannical regime in Iraq was a lot more meaningful in the aftermath of the Halabja attack than in 2003. During the UNSCOM operations in Iraq after 1991, some labs were traced where chemical weapons could have been produced during the Saddam regime. Later the Iraq Survey Group (ISG) noted in its final report that there is no evidence to support that Iraq has engaged in production

of chemical weapons after 1991. In February 2009, Iraq became a member of the Chemical Weapons Convention (CWC) after setting up the National Monitoring Directorate.

The execution of Chemical Ali is a grim reminder of the threat from chemical weapons. The perpetrator is dead but the idea and the means are still available. The end of Chemical Ali might enliven the debate on chemical warfare. It should also inspire the global community to revisit the threat from chemical weapons and renew cooperation to ensure that chemical agents remain inaccessible to the non state actors like the al Qaeda and the Taliban. These militant groups are irresponsible and are forever looking for ways and means to induce maximum damage to innocent lives across the globe.

Endnotes:

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United States of America: Chemical Weapons Profile

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Summary

During the First World War, the United States stockpiled and used chemical weapons against Germany. However during World War II, President Roosevelt announced no-first-use policies. Chemical weapons were not used by either the United States or its allies in this war. During the early phase of cold war, the United States experimented to develop a wide range of incapacitating chemical agents and weapons. But in the late 1970s, President Nixon unilaterally renounced the first use of chemical weapons and halted the production of chemical weapons. The United States ratified the Geneva Protocol which banned the use of chemical and biological weapons on January 22, 1975. The United States also ratified the Chemical Weapons Convention which came into force in April 1997. According to the U.S. Army Chemical Materials Agency as on July, 2009, the United States has destroyed more than 60% of the original stockpile. However, reports noted that as of April 2009, some 12,600 tons of the original 31,500 tons of blister and nerve agents remain to be destroyed.

Chemical weapons make premeditated use of the toxic properties of chemical substances to inflict death or harm to human beings and are known as weapons of mass destruction along with Nuclear and Biological weapons.¹ The United States was part of Hague Conventions which were held in 1899 and 1907. Hague Conventions banned aerial bombings and use of chemical warfare among other initiatives. The United States Army Chemical Materials Agency sources reveal that during the First World War, the United States started stockpiling chemical weapons and used its chemical weapons against Germany. The United States also deployed weapons produced by the French. However after the World War I, the United States signed the Washington Naval Treaty, also known as Five-Power Treaty on February 6, 1922 along with the British Empire, the Japanese empire, the French third republic as well as the kingdom of Italy. This treaty aimed at banning chemical weapons but could not succeed as the French rejected it. Subsequently, the continued stockpile of chemical weapons of the United States exceeded to 30,000 tons.

A no-first-use policy was announced by US President Roosevelt during World War II. But Roosevelt asserted retaliation of its kind in the case of any use of chemical agents against it.² However during this war, chemical weapons were not used by the United States or its allies. Though, an accident occurred in 1943 at the port of Bari in Southern Italy when Germans attacked the port on December 2, which resulted in destroying and sinking of several American ships including its World War II cargo ship 'John Harvey'. It was carrying a hidden cargo of M41-A1 100 lb mustard gas bombs to the Mediterranean theatre as approved by US President Roosevelt in August 1943 since he had pledged of in kind retaliation in the event of attack on the allies by chemical weapons. John Harvey was chosen to pass on the shipment of mustard gas to Italy which was to be held in reserve as there were fears that Hitler could use poison gas to redress the strategic balance.³ However, the presence of the mustard gas bombs on the ship was highly classified information and authorities were not aware of it. According to the United States

military account, after the attack, sixty nine Americans lost their lives caused by exposure and immersion as the ship blew up.⁴ But the presence of mustard gas in the Port of Bari incident was kept secret at that time and even many years after of war.⁵

Development or stockpiling of chemical weapons was not halted even after the end of World War II. According to a Staff report prepared for the Committee on Veterans' Affairs in the United States Senate in 1994, thousands of American soldiers were exposed to chemical warfare agents during cold war testing programs as well as in accidents.⁶

During the 1960s and 1970s, the United States experimented to develop a wide range of incapacitating chemical agents such as psycho-behavioral, non-lethal including lysergic acid diethylamide intended at effective mind control. These chemical agents included marijuana derivatives, tranquilizers such as ketamine or fentanyl, as well as a number of glycolate anticholinergics. 3-quinuclidinyl benzilate was one of the anticholinergic compounds, which was a military incapacitating agent. It was given a code name 'BZ' by North Atlantic Treaty Organisation (NATO). The BZ was developed as weapon in the early 1960s for battlefield use. It was alleged that American troops used BZ as a counter-insurgency weapon during the Vietnam War though United States maintained that it was never used.⁷

Finally, on November 25, 1969, the United States President Richard Nixon declared unilateral renouncement of the first use of chemical weapons.⁸ According to the US Army sources, a unilateral decree was issued by Nixon to halt the production and transport of chemical weapons. During the period of 1967-70, the United States launched a destruction process known as Operation CHASE under which disposal of chemical weapons was carried out by sinking ships laden with chemical weapons in the Atlantic Ocean. The United States embarked on the research to invent safer disposal methods for chemical weapons in the 1970s. According to the U.S. Army Chemical Material Agency, the United States disposed of several thousand tons of mustard gas by

incineration at Rocky Mountain Arsenal and nearly 4,200 tons of nerve agents by chemical neutralization at Tooele Army Depot and Rocky Mountain Arsenal.⁹ On January 22, 1975, the United States ratified the Geneva Protocol of 1925 which prohibited the use of chemical and biological weapons. The ratification of Geneva Protocol by the United States took place after several decades of deliberations as it was signed on June 17, 1925.

During the 1980s, the United States started stockpile reductions drive with destroying its entire stock of BZ beginning in 1988 as well as by removing its some outdated munitions. The destruction process of chemical agents at Johnston Atoll Chemical Agent Disposal System began in June 1990.

In 1986, United States President Ronald Reagan entered into an agreement with German Chancellor Helmut Kohl, aimed at removal of the United States stockpile of chemical weapons from Germany. In July 1990, under the Operation Steel Box, two ships carrying over 100,000 shells containing GB and VX. These shells had been taken from United States army's depots such as FSTS (Forward Storage/Transportation Sites and Miesau. These shells were transported from Bremerhaven Germany to Johnston Atoll in the Pacific in a 46-day nonstop journey.¹⁰

The United States President H.W. Bush and then Soviet Union President Mikhail Gorbachev signed an "Agreement on Destruction and Non-production of Chemical Weapons and on Measures to Facilitate the Multilateral Convention on Banning Chemical Weapons" on June 1, 1990. The agreement required the destruction of Chemical Weapons stockpiles down to no more than 5,000 agent tons each by December 31, 2002, beginning in 1992.¹¹

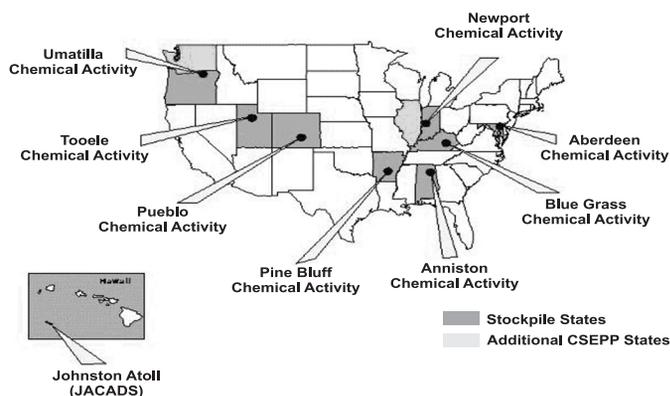
In May 1991, United States President George H.W. Bush expressed commitment to destroy all its chemical weapons. The Chemical Weapons Convention was signed by the United States in 1993. The United States ratified the Chemical Weapons Convention on April 26, 1997. According to the convention, by April 2012, all the chemical weapon agents, its

dispersal systems as well as production centers and facilities should be destroyed. The CWC banned the possession of most of the chemical weapons, chemical weapons development. It also required the destruction of existing stockpiles, precursor chemicals, production facilities and weapon delivery systems.¹² By 2007, the United States had been successful in destroying only 45% of its total stockpile of chemical weapons.

According to the U.S. Army Chemical Materials Agency sources by July 2009, 63% of the original stockpile of the United States which is approximately 31,100 metric tons (30,609 long tons) of nerve and mustard agents declared in 1997 has been destroyed.¹³ By 2007, 13,996 metric tons of prohibited weapons were destroyed in order to meet the Phase III quota and deadline. In the Phase III, the original commitment required that all countries would destroy 45 percent of the chemical stockpiles by April 2004. Realising the improbability to meet this deadline, the George W. Bush administration, in September 2003, requested for new deadline until December 2007 for the Phase III. Bush administration also announced a probable requirement for an extension until April 2012 for Phase IV. These extension procedures are spelled out in the convention. Yet, the latest date allowed by the treaty is April 2012. However, it was pointed out by the United States that it may not be possible to meet this deadline considering environmental challenges as well as the United States decision to first destroy the leaking individual chemical shells and then bulk storage chemical weapons.¹⁴

The following map prepared by the Henry L. Stimson Center depicts the chemical weapon storage sites existing in the United States. As shown in the map, these facilities are Umatilla Chemical Activity in Oregon, Pueblo Chemical Activity in Colorado, Blue Grass Army Activity in Kentucky, Anniston Chemical Activity in Alabama, Pine Bluff Chemical Activity in Arkansas and Tooele Chemical Activity in Utah, Aberdeen Chemical Activity in Maryland, Newport Chemical Activity in Indiana and one located outside of the Continental US on Johnston Atoll.¹⁵ The United States also has a Chemical Stockpile Emergency Preparedness

Program (CSEPP) in all these states having chemical activities. The goal of CSEPP is to develop and enhance the emergency preparedness capabilities in the event of a chemical accident at the chemical activity centers. Two additional states, Washington and Illinois also participate in the CSEPP as of their borders are in proximity to the stockpiles storage facilities in Indiana and Oregon, respectively.¹⁶ The map also depicts these two additional CSEPP states.



Source: *The Henry L. Stimson Center, Washington D.C. at <http://www.stimson.org/cbw/?sn=CB20011220125>*

Chemical Weapons Storage Sites in the United States

According to a report of Bulletin of the Atomic Scientists, as of April 2009, some 12,600 tons of the original 31,500 tons of blister and nerve agents are yet to be destroyed and the program continues to lag far behind schedule.¹⁷

However, commenting on the status of chemical weapons in the United States on December 3, 2009, US Assistant Secretary of Defense for Nuclear and Chemical and Biological Defence Programs Andrew C. Weber said that till date the United states has destroyed 67.6 percent of its Category 1 chemical weapons, which includes 85.3 percent of chemical rockets, 96.6 percent of nerve agent and destruction of all the binary chemical weapons. The United States has destroyed all of its Category 3 chemical weapons and all former chemical weapons

production facilities. Assistant Secretary Weber noted that the United States has provided an estimated 20.5 billion dollars for the destruction of chemical weapons.¹⁸ The Obama administration appears committed to expedite the chemical weapons destruction process.

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Scientists Working Group on Biological and Chemical Weapons

A Washington based research organisation, the Center for Arms Control and Non-Proliferation is known for its work aimed at enhancing international peace and security in the 21st century. The Center is funded by private foundations and individual donors. The center came into being in 1962 as the research branch of Council for a Livable World, an organisation founded in 1962 by eminent nuclear physicist Leo Szilard and other scientists. Their motive was to stop the use and spread of nuclear weapons. In 1980, the Center evolved into its own non-profit, independent organisation with key focus on nuclear weapons. The center's mandate also includes studies on other present and emerging security threats.

The center also has a programme on Biological and Chemical Weapons. It is known as the "The Scientists Working Group on Biological and Chemical Weapons Control". It was established in 1989 at the Federation of American Scientists. During November 2003, the Working Group shifted to the Center for Arms Control and Non-Proliferation and joined the center's new programme on biological and chemical weapons control. Presently, this group is working towards reinforcing the norm against biological weapons and broadening the norm to encompass all misuse of biology.

The Working Group is involved towards writing working papers and reports on technical and policy issues. They also hold seminars and briefings for US government officials. The Working Group constitutes of members with extensive experience with biological weapons issues. The strength of a group also lies with its technical expertise. The experts contribute on a voluntary basis in the group's activities.

Vast array of issues are deliberated, discussed and researched by the Working Group. They include issues like preventing the development of biochemical disabling agents as weapons, promoting international measures to monitor

biological weapons-capable activities, global cooperative measures for combating infectious diseases, ethical education of bioscientists, and monitoring US biodefense and anti-bioterrorism activities. A year back (January 15, 2009) they have published a very detailed report titled "Reducing Biological Risks to Security: International Policy Recommendations for the Obama Administration". The report argues that even though in recent years the US government has strengthened its national preparedness and response capabilities for catastrophic disease events, including bioterrorism but is yet to pay focused attention towards evolving the prevention and response measures internationally. This lacuna demonstrates the lack of commitment on the part of US administration towards improving global public health infrastructure as well as towards reducing deliberate and accidental biological risks to global security. They have also offered various policy recommendations towards it.

The working group has issued a statement on January 26, 2010 contextualizing the biological threats for the present times. As per this statement the bioterrorist threat has been greatly exaggerated. It is felt that the bioweapons assessments should be done by taking into account the complex set of social and technical issues that shape bioweapons development and use by state and non-state actors. The group feels that the focus should be on more plausible threats than the worst-case scenarios that have largely driven discussion to date. Finally, it has been argued that the Bioterrorist threats should be seen and addressed within a wider public health context. This appears to be an important argument because it indirectly talks about the dual use utility of the investments in the health care field. Such investments would always come handy during natural or unnatural outbreak of diseases.

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Chemical and Biological News

ARMS CONTROL

Yemen moves to outlaw chemical weapons

The Yemeni Cabinet approved a draft measure to outlaw the use, stockpiling and manufacture of chemical weapons, officials said.

Submitted by the Ministry of Foreign Affairs, the law is meant to keep Yemen compliant with the terms of an international treaty it signed in 2000, the country's official news agency, SABA, reported.

Officials noted the law would also allow Yemen to use chemicals covered by the treaty — the International Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction — for non-prohibited purposes.

SABA said the Cabinet asserted the measure will aid in preventing the use of chemical weapons by terrorists, thus enhancing Yemen's security and stability.

http://www.upi.com/Top_News/International/2010/01/19/Yemen-moves-to-outlaw-chemical-weapons/UPI-80491263923242/

Umatilla Chemical Depot Resumes Disposal Operations

The incineration of chemical warfare materials stockpiled at the Umatilla Chemical Depot in Oregon has started up again following the state-ordered halt to disposal in October, the Tri-City, Wash., *Herald* reported (see *GSN*, Dec. 15, 2009).

The burning of mustard agent was permitted to resume after more restrictive limits were established on the amount of organic salts allowed in bulk containers going through the incinerator. The cap was set in order to comply with air quality regulations and to prevent potentially unsafe emissions from the

Umatilla Chemical Agent Disposal Facility; it is expected to prolong chemical disarmament work at the depot.

The Oregon Environmental Quality Department on Friday gave its approval to an initial permit for a trial burn that limits the amount of salt permitted to 435 pounds, agency Chemical Demilitarization Program official Rich Duval said.

A single ton container filled with mustard agent had been incinerated. A public comment period is set to take place before the trial incineration period can begin as the plant ramps up toward full disposal operations for mustard agent.

The mustard agent effort will be the last chemical weapons elimination campaign at Umatilla. It is set to be finished within one to two years (Annette Cary, *Tri-City Herald*, Jan. 26).

http://www.globalsecuritynewswire.org/gsn/nw_20100126_9090.php

DISARMAMENT

New Coalition Aims to Promote Chemical Weapons Disarmament, Nonproliferation

Dozens of nongovernmental organisations from around the world are forming an umbrella group to help promote the total elimination of chemical weapons and prevent their use by terrorists (see *GSN*, Dec. 3, 2009).

The Chemical Weapons Convention Coalition, in a mission statement, identifies itself as “an independent, international body whose mission is to support” the global ban on chemical warfare materials “with focused civil society action aimed at achieving full membership of the CWC, the safe and timely elimination of all chemical weapons, preventing the misuse of chemicals for hostile purposes and promoting their peaceful use.”

It is among a scant number of such alliances established to support the aims of a specific nonproliferation treaty, said Paul Walker, head of the Security and Sustainability program at Global Green USA. The environmental organisation helped develop the coalition and will serve as its hub of operations.

The new group has been years in the planning. Supporters believe it can help raise the profile of the pact in regions where membership and implementation of its rules remain a cause of concern.

“All of Europe is a member now, all of the Americas ... The problem areas are really in the Middle East and Asia and a couple countries in Africa,” Walker told *Global Security Newswire*. “So we realized if we were to build a coalition to promote universality we just couldn’t do it with the groups that normally come to the annual meetings” of member nations to the convention.

Representatives from about 35 nongovernmental organisations — most from outside the United States and Western Europe — attended a two-day session last month in The Hague, Netherlands, to prepare the founding document for the coalition. Organizers hope to attract no fewer than 100 groups to the coalition by the end of 2010.

A plan of work through 2012 — the year by which all CWC states must have eliminated any arsenals of prohibited materials — is set to be completed in a couple months, Walker said.

Among the planned activities detailed in the founding document is the preparation of a database on all nations’ activities relative to the convention, including whether they have joined and the size of chemical industries that could be turned to illicit activities. The coalition also intends to produce a yearly report card assessing whether CWC member states are instituting the pact’s requirements at the national level.

Tools for achieving the group’s goals will include public meetings, written commentaries, letter-writing campaigns, interviews, analyses and educational programs, according to the

founding document. The target audience will be officials at all levels of government.

Work would not be limited to that sector, though. The coalition intends to prepare an analysis with recommendations for augmenting the nonproliferation value of the inspection program of the convention’s monitoring body, the Organisation for the Prohibition of Chemical Weapons. It will also offer “research and expert policy advice” to the organisation, its member states and other parties, according to the group.

Success and Challenges

The Chemical Weapons Convention entered into force in 1997, prohibiting development, production, stockpiling, use or transfer of warfare materials such as mustard blister agent and the nerve agents VX and sarin. There are 188 member states, covering 98 percent of the landmass of the Earth.

Three nations — Albania, India and a country that is never officially identified but widely believed to be South Korea — have eliminated their stockpiles of banned materials. Disposal operations are continuing in Russia and the United States, and Iraq and Libya have pledged to destroy their chemical weapons.

“The CWC is often considered to be the most successful of the WMD treaties, and arguably that is the case,” according to Angela Woodward, program director for national implementation at the London-based Verification Research, Training and Information Center, which helped establish the coalition. “But there remain certain significant problems with the convention which states parties have utterly failed to deal with, such as noncompliance issues (like ‘nonlethal weapons’) or instigating the on-site inspection mechanism” (see *GSN*, Nov. 6, 2009).

“When states parties, and the membership organisation they created for the convention, cannot deal with these problems, it is civil society’s responsibility to air these problems and constructively work towards finding solutions to them,” she told *GSN* by e-mail.

Universality of the convention remains a major issue. Just seven nations have yet to join: Angola, Egypt, Israel, Myanmar, North Korea, Somalia and Syria. In that list of nations is one — Egypt — that is known to have used chemical weapons in conflict, and two — North Korea and Syria — that are suspected of housing chemical stockpiles.

The Middle Eastern states are probably the most likely to join the convention in the near future, and the region will host the coalition's next major meeting, Walker said. The hope is to persuade participating nongovernmental groups from the area to promote universality and other CWC issues in their home states through contact with the public and private sectors and the media.

Similar sessions in East Asia and other regions would follow.

The group also hopes through a program of outreach to convince Iraq, Libya, Russia and the United States to conduct "safe, sound and timely destruction of chemical weapons," it said in the initial document. It will further seek to "promote the safe and environmentally sound use of chemicals for peaceful purposes."

Coalition participants might have contacts beyond those possessed by governments who could help push forward the organisation's disarmament objectives, Walker said. He also described an effort that might involve some pressure on nations to fully implement the treaty.

"This whole effort in international security and arms control and disarmament is really a body contact and, in a body-contact sport, you have to make bodily contact," Walker said. "Our efforts are really to go into the regions themselves, raise the issues publicly, more so than probably the OPCW and government agencies can, because most of this is all quiet, backroom diplomacy."

The Hague-based verification organisation has thrown its support behind the new group.

Both the organisation and its member states can "benefit from outside voices that can point out faults in the system," said OPCW spokesman Michael Luhan. "There's a lot of things that go unsaid in more formal venues."

The U.S. State Department said it was familiar with the coalition but that it was too early to consider its value.

Walker said the coalition expects to have three to four part-time employees and an annual budget of between \$250,000 and \$300,000 for staff, meetings and travel for coalition participants. The hope is that foundations and convention states will provide the funding, he said.

"I'm feeling positive," Woodward stated. "The CWCC members will be encouraged and supported to work towards the coalition's goals. Some will be easier to achieve than others. But at the very least, the activities of those NGOs who are already working in support of the CWC can be amplified through membership of a coalition — the whole is bigger than the sum of its parts."

http://www.globalsecuritynewswire.org/gsn/nw_20100122_8824.php

Last Two U.S. Chemical Weapons Disposal Sites Funded at \$550M

Funding for preparation of the last two U.S. installations set to begin destruction of their chemical weapon stockpiles received a significant boost in the fiscal 2010 budget — roughly 30 percent over last year's allowance.

The major appropriations hike comes as Washington looks to demonstrate to the international community that it is maintaining a good faith effort to finish destroying its chemical arsenal soon as possible, even if there is no chance of meeting the Chemical Weapons Convention deadline of April 2012.

The Defense Department's Assembled Chemical Weapons Alternatives program

received \$550 million in fiscal 2010, which began on Oct. 1 of last year. Funding was fully set only last month.

The ACWA program is in charge of munitions destruction operations at the Pueblo Chemical Depot in Colorado and the Blue Grass Army Depot in Kentucky. The U.S. Army Chemical Materials Agency has conducted disposal work at the remaining seven other stockpile sites.

To date, the Pentagon has destroyed more than 70 percent of the country's original declared arsenal of 31,500 tons of chemical warfare materials. Stockpiles at Pueblo and Blue Grass represent 10 percent of the stockpile and are respectively expected to be destroyed by 2017 and 2021— meaning both would miss the already-extended international disposal deadline and the Kentucky site would continue operations past the congressionally mandated end date of 2017.

After five or six years of being “grossly underfunded” during the Bush administration “to the real credit of the Obama administration, they came in for the FY 10 defense request and agreed to plus up the [ACWA] construction moneys by a couple hundred million dollars,” said Paul Walker, director of the Security and Sustainability program at the environmental organisation Global Green USA (see *GSN*, April 29, 2009).

It remains to be seen whether the higher funding level will be maintained. ACWA officials said it would not be appropriate to disclose the fiscal 2011 budget request until it is advertised in President Barack Obama's spending proposal to Congress at the beginning of February.

“We're guardedly optimistic but certainly pleased with finally realizing full funding of the ACWA project at least in fiscal 2010,” said Craig Williams, co-chairman of the Kentucky Chemical Demilitarization Citizens' Advisory Commission.

Lawmakers in Colorado and Kentucky have pressed for more money for chemical agent neutralization sites, and Defense Secretary Robert Gates requested \$545 million to cover

construction, administrative and research and development costs, officials and observers said. Congress added another \$5 million.

No amount of funding is expected to allow disposal work to accelerate to the point of meeting the Chemical Weapons Convention schedule or even Congress' 2017 mandate.

“We clearly cannot make 2012,” said ACWA Program Manager Kevin Flamm. “As much as we would love to be in that situation, that just is not in the realm of possibility.”

The program has been constrained by funding levels and setbacks in development of the disposal facilities, along with legal restrictions that would make it impossible to transfer the Colorado and Kentucky stockpiles to states with operating disarmament facilities.

The latest funding does, though, allow the Pentagon to push ahead with awarding some major construction contracts. That will support its aim to finish work at Pueblo in 2017 rather than the earlier anticipated date of 2020 and at Blue Grass in 2021 rather than 2023.

“It'll be very important for the Obama administration to continue this [ACWA] funding so that the construction does get done in a timely way and the facilities get fully systematized,” Walker said. “Hopefully in less than a decade from now we can declare the whole U.S chemical weapons stockpile completely gone.”

Deadline Issues

The United States joined the Chemical Weapons Convention in 1997, the year the pact entered into force. Like the 187 other member nations, it has pledged not to develop, produce, stockpile or use banned materials such as mustard blister agent or sarin nerve agent.

All parties to the convention were supposed to have destroyed any chemical stockpiles by April 2007. Several received schedule extensions, with the United States successfully requesting the maximum five-year allowance.

Congress entered the fray three years ago with its own demand as it became increasingly apparent that the country would not be able to make the deadline.

In its efforts to catch up to lawmakers' demand for full chemical disarmament by 2017, the ACWA program is considering new options to speed weapons disposal schedules. Washington is also working to demonstrate to the Organisation for the Prohibition of Chemical Weapons, the monitoring agency for the convention, that it is sincerely striving to destroy its chemical agents as quickly as possible.

Defense officials are searching for technological ways to bridge an anticipated gap in disposal work so that operations can proceed continuously. In December, ACWA representatives briefed residents near Pueblo and Blue Grass on their proposal to use a method called Explosive Destruction Technology to eliminate some munitions at both installations (see *GSN*, Dec. 9, 2009).

"We're looking at how we can augment the facilities to provide additional destruction capability at both sites," Flamm told *Global Security Newswire*.

Under the current schedule, there are two projected periods when no disposal work would be going on in the country. The first gap is projected to begin in January 2012 when the U.S. Army Chemical Materials Agency finishes operations and end in January 2015 when the chemical neutralization facility at Pueblo comes online. The second break is projected to last from December 2017 to October 2018 — the time between the point at which the Pueblo site finishes work and the Blue Grass facility comes online.

Assembled Chemical Weapons Alternatives officials are proposing to use mobile Explosive Destruction Technology systems that would allow disposal operations to begin at Pueblo in 2012 while the full Chemical Agent-Destruction Pilot Plant there is still under construction.

Flamm said officials are considering several EDT options that include a trailer-mounted

mobile system used by the U.S. Army for years to destroy recovered chemical munitions and the commercial DAVINCH system that has been employed in Japan and Belgium.

"We're looking at using one or a combination of these systems at Pueblo and Blue Grass to allow us to begin destruction operations prior to the main facilities going operational," Flamm said. "This does several things: it allows for continuity in destruction operations with respect to the national programs. Secondly, it allows us to potentially complete destruction operations earlier."

Using explosive technologies would be expected to shorten disposal work by months, not years, Flamm said.

The technology might be applied to 15 percent of the chemical weapons stockpiles at each site, according to Flamm. Explosive technology is being considered for 125,000 mustard agent-filled munitions in Colorado and 15,000 mustard- and nerve-agent filled projectiles in Kentucky.

Congressionally mandated citizens' advisory commissions in both states have opposed the use of the technology beyond the small amount of munitions deemed too dangerous to send through the agent neutralization process.

"As far as we're concerned six months is nothing," Colorado Chemical Demilitarization Citizens' Advisory Commission Chairwoman Irene Kornelly said of the anticipated time savings. "Not when you've been waiting since 1994 to get this process done. Six months is a joke. Six months is nothing in this process."

In a letter, to ACWA officials, the Colorado panel said it could not "endorse any specific EDT system for use at [Pueblo] at this time due to a lack of information about the technical capabilities of the systems, reliability and maintenance concerns and the environmental impacts and compliance of any such system within the U.S."

WilliamssaidtheKentuckyadvisorycommission was presently opposed to the proposal but

would wait and see if and how it was applied in Colorado before objecting further.

“As far as the acceptability of an explosive detonation technology, we remain unconvinced that it will meet the [environmental and health] criteria required but the jury’s still out on that,” said Williams, who also heads the Kentucky-based watchdog Chemical Weapons Working Group.

An ACWA assessment on the feasibility of using Explosive Destruction Technology has been sent to the Defense Department for review.

Army Disposal Work Continues

Progress on destroying the other 90 percent of the United States chemical weapons stockpile continues relatively unabated. As of Jan. 20, the Army had eliminated 22,263 tons of chemical agent — 70.7 percent of the United State’s original declared tonnage, according to Chemical Materials Agency spokesman Greg Mahall.

The agency’s fiscal 2010 budget is \$1.56 billion. That is down slightly from the agency’s fiscal 2009 budget of \$1.6 billion (see **GSN**, Nov. 6, 2008). Approximately \$1.15 billion of this year’s funding is set to go to operations and maintenance, Mahall said.

Three of the agency’s seven sites have completed their work. Weapons disposal operations continue at the Anniston Army Depot in Alabama, the Pine Bluff Arsenal in Arkansas, the Umatilla Chemical Depot in Oregon and the Deseret Chemical Depot in Utah.

The Army’s working estimates for disposal work to be finished is: June 2013 for Utah; January 2013 for Umatilla; December 2012 for Anniston; and May 2011 for Pine Bluff, according to Mahall.

“Caveat all of those dates,” Mahall said, adding that the Army was working on moving them all forward. “Right now, our prognosis seems to indicate that we feel very confident

that we’ll meet the 2012 deadline at those four sites.”

http://www.globalsecuritynewswire.org/gsn/nw_20100126_6522.php

NATIONAL AND INTERNATIONAL DEVELOPMENTS

Officials fear toxic ingredient in Botox [Botulinum toxin] could become terrorist tool

Last year, [Ken] Coleman and fellow researcher Raymond Zilinskas set out to test whether militant groups could easily exploit the counterfeit Botox network to obtain materials for a bioterrorism attack. In a project sponsored by the James Martin Center for Nonproliferation Studies, [the] two scientists found that a biologist with a master’s degree and \$2,000 worth of equipment could easily make a gram of pure toxin, an amount equal to the weight of a small paper clip but enough, in theory, to kill thousands of people. Obtaining the most lethal strain of the bacterium might have posed a significant hurdle for would-be terrorists in the recent past. But today, the prospect of tapping into the multibillion-dollar market for anti-wrinkle drugs has spawned an underground network of suppliers and distributors who do most of their transactions online, the researchers found.

<http://www.washingtonpost.com/wp-dyn/content/article/2010/01/24/AR2010012403013.html>

Nunn-Lugar Cooperative releases 2009 report

A summary of the progress of the Nunn-Lugar Cooperative Threat Reduction programs for 2009 has been released by U.S. Sen. Dick Lugar.

To date, Nunn-Lugar has made substantial progress in combating the global risk of biological weapons, neutralizing chemical weapons, containing the nuclear threat and preventing the proliferation of weapons of mass destruction.

“Malefactors in the world want to use weapons of mass destruction to terrorize American citizens, harm our soldiers deployed around the world, and attack our partner countries,” Lugar said. “Proliferation of WMD remains the number one national security threat facing the United States and the international community. In 2009, the Nunn-Lugar program continued to make us safer by achieving meaningful progress in the destruction and dismantlement of massive Soviet weapons systems and the facilities that developed them. There is much more work to do in combating biological, nuclear, and chemical threats through Nunn-Lugar cooperative threat reduction and the global expansion of the Nunn-Lugar program.”

According to the 2009 Nunn-Lugar Report Card, three biological stations - making a program total of 19 - were built in 2009 to act as the front-line of defense in biological pathogen research and monitoring.

Additionally, construction began on two Central Reference Laboratories in Georgia and Azerbaijan, which will provide consolidated, safe and secure storage for pathogens and highly infectious disease strains inherited from the former Soviet Union.

The CRLs will also house near real-time detection and reporting of a bio-terrorist attack, allowing for an effective and timely response.

Lugar is also expected to announce this week that the Nunn-Lugar program will expand beyond the former Soviet Union and act as a Nunn-Lugar Global Security Cooperation to meet unexpected threats worldwide.

“We hope for and anticipate constructive movement in arms control on the world’s biggest stages,” Lugar said. “But we should be cautious in our estimates of the influence of U.S. arsenal cuts on the behavior of smaller nuclear powers and aspirants. I believe that our success in encouraging others to abandon weapons or limit their expansion will depend much more on the hard work of expanding arms control and non-proliferation tools and addressing regional circumstances that influence the

choices of governments related to weapons of mass destruction.”

<http://www.bioprepwatch.com/news/211830-nunn-lugar-cooperative-releases-2009-report>

Panel: US not ready for bioterrorist attack

While experts say the United States is woefully unprepared to deal with a biological attack, authorities in Los Angeles County insist the region has a system in place to prevent and respond to germ attacks.

A Congressional panel Tuesday released a report that gave the United States an “F” for its readiness to respond to a biological attack. The report also gave failing grades for government reform and for efforts to recruit and train anti-terrorism experts.

While the report said the government was doing a good job in some areas related to counter-terrorism, it concluded that safety officials do not grasp the serious threat from biological attacks.

“As the delayed response to H1N1 has demonstrated, the United States is woefully behind in its capability to rapidly produce vaccines and therapeutics, essential steps for adequately responding to a biological threat, whether natural or man-made,” read the report from the Commission on Prevention of Weapons of Mass Destruction Proliferation and Terrorism.

From prevention of attacks to treatment of infected people “virtually all links are weak,” the report stated.

The Congressional report found that al-Qaida was likely to try to use chemical weapons.

“If al-Qaida recruits skilled bioscientists, it will acquire the capability to develop and use biological weapons,” the report stated.

In Los Angeles County, emergency responders insisted local governments are relatively well-

prepared for attacks from germs or other biological agents.

Due to the constant threat of earthquakes, Southern California's emergency workers are used to reacting quickly to calamity, said Steve Whitmore, a spokesman for the Los Angeles County Sheriff's Department.

The county's Terrorism Early Warning Group would assess threats and almost immediately get information out to street cops, firefighters and public works staffs, Whitmore said.

The Sheriff's Department would be the lead agency in coordinating any such response, he said.

The department this month paid \$10,000 for Johnny Ringo, a dog deputies claim can sniff out biological weapons.

The dog is the "only entity in the world" that can detect tiny concentrations of such weapons, Whitmore said.

"We don't have to wait for this to be released," he said. "We can find this stuff before it gets out."

Unlike Johnny Ringo, machines made to detect biological agents would have trouble sorting out and finding all the different harmful compounds, said Jack Beauchamp, a professor of chemistry at Caltech.

"There's been a lot work on technology to develop instruments that would target very specific agents, for instance, anthrax," he said. "But again, there's the variety of agents that one can employ. There's no one instrument that could catch everything."

A well-funded laboratory could indeed produce dangerous chemicals or germs, Beauchamp said.

"If you had enough money, it would certainly be possible," he said.

While most cities have crafted plans to respond to earthquakes, biological attacks present

unique challenges, said Fred Latham, city manager of Santa Fe Springs.

The city is home to several chemical processing plants, which prompted the city's staff to write a disaster playbook. Included in the manual is a section on biological attacks, Latham said.

"Bio and chemical have a very, very unique set of issues," Latham said.

The threat is invisible, hard to notice right away and can sometimes pass from person to person.

"It's unique in terms of how the first responders handle the incident," he said. "(Biological attacks) have broader implications. No. 1, it's invisible, and No. 2 it could have consequences beyond the local area."

Santa Fe Springs as recently as eight months ago conducted a biological attack drill, Latham said.

While drills, communications systems and super dogs are helpful, the federal report criticized the nation's ability to quickly produce vaccines and treatments for illnesses.

For instance, there is not a good vaccine for the treatment of anthrax, said Dr. Jonathan Fielding, the county's public health officer.

Once people inhale anthrax spores, they quickly become sick and can die without rapid treatment, he said.

"We do need, nationally, a much better vaccine against anthrax," he said. "The one we have now is full of side effects and isn't that effective."

Nonetheless, the county has made progress since the attacks on Sept. 11, 2001, he said.

The county has better stockpiles of vaccines, and laboratories can more quickly identify toxins, he said.

And the county learned a lot about quickly handing out vaccines during last year's swine flu scare, he said.

“Los Angeles County is definitely not failing,” he said. “This report just reinforces the importance of protecting public health - it has to always be job No. 1.”

http://www.whittierdailynews.com/news/ci_14273038

Al-Qaeda seeks WMD, US unprepared: reports

The United States has not done enough to protect the country against the threat of weapons of mass destruction even as Al-Qaeda appears intent on staging a large-scale attack, reports said.

A bipartisan panel warned that the government had failed to adopt measures to counter the danger posed by extremists using WMD, saying the administration lacked plans for a rapid response to a possible biological attack.

“Nearly a decade after September 11, 2001, one year after our original report, and one month after the Christmas Day bombing attempt, the United States is failing to address several urgent threats, especially bioterrorism,” said former senator Bob Graham, chair of the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism.

He said that Washington no longer had “the luxury of a slow learning curve, when we know Al-Qaeda is interested in bioweapons.”

In its “report card,” the commission also gave the federal government low marks for failing to recruit a new generation of national security experts and for failing to improve congressional oversight of intelligence and homeland security agencies.

The findings came as a former CIA officer wrote in a report that Al-Qaeda’s leaders have been working methodically since the 1990s to secure weapons that could inflict massive bloodshed.

Although other extremists had looked into obtaining such weapons, Al-Qaeda “is the only group known to be pursuing a long-

term, persistent and systematic approach to developing weapons to be used in mass casualty attacks,” wrote Rolf Mowatt-Larssen, who led the CIA’s WMD department.

He acknowledged that the failure to find WMD in Iraq had damaged the US government’s credibility and had spread skepticism about the threat posed by Al-Qaeda getting its hands on nuclear, biological or chemical weapons.

“That said, WMD terrorism is not Iraqi WMD,” he wrote in the report released by the Harvard Kennedy School of Government’s Belfer Center for Science and International Affairs.

He argued that intelligence on Al-Qaeda’s activities was much more extensive and reliable than the information about Saddam Hussein’s weapons programs.

His report said Al-Qaeda’s efforts to develop biological and nuclear weapons were not “empty rhetoric” and that the group’s leaders appeared to have ruled out smaller-scale attacks with simpler devices.

“If Osama bin Laden and his lieutenants had been interested in employing crude chemical, biological and radiological materials in small-scale attacks, there is little doubt they could have done so by now,” he wrote.

In a “highly compartmentalized” operation, Al-Qaeda had pursued parallel tracks to try to secure the destructive weapons, building a biological lab and separately acquiring strains of anthrax bacteria before the attacks of September 11, 2001, the report said.

The anthrax was apparently never successfully placed in a weapon and scientists working at a lab in Afghanistan had to flee when US-led forces invaded after the 9/11 attacks, it said.

In 2003, US officials feared that Al-Qaeda was on the verge of obtaining atomic weapons after intercepting a message from a Saudi operative referring to plans to secure Russian nuclear devices.

The sensitive intelligence was passed on to Riyadh and the Saudi government then arrested Al-Qaeda suspects in a major crackdown.

But US officials were never sure if the nuclear plot was disrupted or merely pushed underground.

The former CIA officer also said Al-Qaeda's second-in-command, Ayman al-Zawahiri, in 2003 had called off plans for a chemical attack on New York's subways "for something better," a cryptic remark that remains a mystery.

The bipartisan commission on the WMD threat, created by Congress, had said in its initial report in December 2008 that it was "more likely than not" that a terror attack using weapons of mass destruction would be carried out somewhere in the world by the end of 2013.

http://www.google.com/hostednews/afp/article/ALeqM5gLAajt6TxV5B4jBdUh_epRS8CKBg

Iraq executes Chemical Ali

Ali Hassan al-Majid was notorious for the gassing of more than 5,000 Kurds in 1988 and other brutal campaigns

Saddam Hussein's cousin Ali Hassan al-Majid, or Chemical Ali, listens to prosecution evidence during his genocide trial. Photograph: Darko Vojinovic/AP

Ali Hassan al-Majid, better known as Chemical Ali, was executed today for crimes against humanity in Iraq's highest profile execution since Saddam Hussein was hanged three years ago.

"The death sentence against Ali Hassan al-Majid has been carried out," said Ali al-Dabbagh, an Iraqi government spokesman.

Dabbagh said Majid was not subjected to any abuse during the execution – unlike Saddam, who was taunted on the gallows in December 2006.

"Everyone abided by the government's instructions and the convicted was not subjected to any breach, chanting, abuse words or insults," Dabbagh said.

The 68-year-old former spy chief and first cousin of Saddam had been sentenced to death on January 17 for ordering the gassing of more than 5,000 Kurds in the northern Iraqi town of Halabja near the Iranian border in 1988. Other officials in Saddam's regime have received jail terms for their roles in the attack.

Majid, one of Saddam's most notorious henchmen during the brutal three-decade reign of the Ba'athists, had received three previous death sentences for atrocities committed during Saddam's rule, particularly in government campaigns against the Kurds in the 1980s and the Shias in the 1990s.

Majid first ordered the use of chemical weapons – mustard gas, sarin and VX – in 1987, culminating in the attack on Halabja. By the end of the Kurdish campaign in 1988 about 4,000 villages had been destroyed, an estimated 180,000 Kurds killed and about 1.5 million deported.

He was nicknamed Chemical Ali by Iraqi Kurds, who also called him the Butcher of Kurdistan

Majid was captured after the 2003 invasion of Iraq and charged with war crimes, crimes against humanity and genocide. Convicted in June 2007, he was sentenced to death for crimes committed in the al-Anfal campaign against the Kurds. His appeal was rejected on 4 September 2007 and he was sentenced to death for the fourth time, by hanging, on 17 January 2010.

Majid, who owed his rise to family ties with Saddam, played a key role in the purge of the Ba'ath party in 1979, when Saddam, formally installed as head of state, sat on the stage of an auditorium and watched "traitors" being led away to their deaths after their names were called out.

In August 1990, after the invasion of Kuwait, Majid was appointed military governor of what Saddam considered to be Iraq's "19th province". But Saddam replaced him three months later for fear his brutal reputation was strengthening the hand of Kuwait's allies. When Iraqi forces were pushed out of Kuwait by a US-led coalition, Majid was appointed interior

minister to help stamp out the Shia rebellion in southern Iraq.

<http://www.guardian.co.uk/world/2010/jan/25/chemical-ali-execution-iraq-kurd>

Compiled by: Wg. Cdr. Ajey Lele,
Dr. Monalisa Joshi and Gunjan Singh

Swine Flu deaths in India rises to 1229: Report

Eight more people have died of Swine Flu in India, taking the toll due to the deadliest flu in the country so far to 1229.

Two of these deaths - one each in Maharashtra and Gujarat - were reported during Sunday. Besides, six deaths occurred in recent days - five in Gujarat and one in Maharashtra, said an official statement of the Union Ministry of Health and Family Welfare.

Of the total swine flu deaths in the country so far, Maharashtra now accounts for 317, while 236 lives have been lost in Gujarat, 176 in Rajasthan, 141 in Karnataka, 93 in Delhi, 52 in Andhra Pradesh, 38 in Punjab, 36 each in Kerala and Haryana, 22 in Madhya Pradesh, 18 in Uttar Pradesh, 13 in Uttarakhand, 8 each in Chandigarh and Himachal Pradesh, 7 in Tamil Nadu, 6 each in Chhattisgarh and Puducherry, 5 in Goa, 4 in Jammu & Kashmir, 3 in Orissa, 2 in Assam and 1 each in Mizoram and Dadra & Nagar Haveli.

Meanwhile, 35 new cases of swine flu were reported from different parts of India, including 20 in Maharashtra, 5 each in Gujarat and Karnataka, 2 each in Chhattisgarh and Rajasthan and 1 in Delhi, said the statement.

With these, the total number of laboratory-confirmed cases of the virus reported in the country so far has gone up to 28,810, the statement added.

Till date, samples from 123079 persons have been tested for Swine Flu in Government Laboratories and a few private Laboratories across the country and 28810(23.40 per cent) of them have been found positive.

<http://www.globalsecurity.org/security/library/news/2010/02/sec-100201-irna02.htm>

Book Review

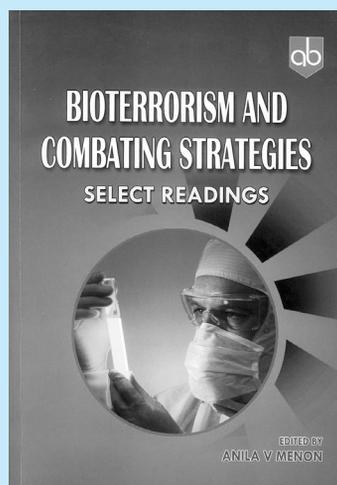
Bioterrorism and Combating Strategies-Select Readings, Editor: Anila V Menon, Amicus Book, the Icfai University Press (2007)

Ms. Pranamita Baruah

The author is a Research Assistant at the IDSA, New Delhi.

Summary

This book deals with various issues associated with biological terrorism and the strategies that are useful for combating it. It assesses the extent of vulnerability against such attacks and makes an attempt to throw light on how various countries have made efforts to deal with biological warfare. This book is a good source of information on this subject.



The book “Bioterrorism and Combating Strategies-Select Readings is an edited volume by Anila V Menon. As the very title suggests, this book basically deals with various aspects of bioterrorism and ways to combat them. Unfortunately, at a time when technological advancement has been treated as a blessing to the world, it has also been used as a tool to unleash massive destruction on humankind. The usage of biological warfare as a tool of violence by terrorist groups has made humankind highly vulnerable to such weapons. While highlighting the need for public health preparedness to deal with bioterrorism, this book also makes an attempt to offer therapeutic countermeasures against bioterrorism. At the same time, it also tries to analyse how challenges like the concerns of the public, infrastructure cost, retaining of skilled personnel etc can be met with adequate methods and procedures in place.

The first chapter “assessing the Unconventional Modes of Unconventional Terrorism: Cyber, Chemical, Biological and Nuclear” offers an in depth analysis of those four modes of unconventional terrorism. While assessing the problems associated with each one of them, three fundamental factors are taken into account: the national infrastructure, the potential deliverability of weapons systems and the assessment of national and transnational adversaries. At present, eight infrastructure systems remain valid: electrical power, gas and oil production, storage and delivery; telecommunications; banking and finances; water supply systems; transportation; emergency services; governmental operations. Weapon deliverability which depends on weapon type and device size, can be of two kinds: low tech delivery and high tech delivery. While low tech delivery systems can be of various kinds (e.g. by foot, bicycle, car, etc), basic tool for high tech delivery is missile system.

As far as transnational terrorist organizations such as Al Qaeda are concerned, they owe no allegiance to any nation state and may use bioterrorism as a strategy to gain power. In this chapter, strategy of various countries to

use a larger part of its own national logistical and administrative data to attack and cripple other nation's information and economic infrastructure has been discussed briefly. The release of technology in the construction of weapons of mass destruction (WMD) and missile capability to antagonize states (Iraq, Iran, North Korea) clearly validate such thesis.

In the same chapter, biological warfare has been defined as the utilization of living organisms (plants, fungi, bacteria, etc) and their toxins to harm, incapacitate or exterminate an adversary's military forces, civilian population, flora and fauna, including livestock. Tools of biological warfare can be delivered by increasingly proliferating conventional warheads as well as civilian delivery means (e.g. anthrax through mail system).

In order to spur the development and procurement of the next generation of medical bio-measures such as vaccines, as well as basic research in micro biological geonomics, a biodefence BioShield programme has been adopted. To achieve similar goal, two additional counterterrorism projects (Bay Watch and Bio Sensor) have also been formed.

While analyzing the factors why biological weapons have become an attractive tool for the terrorist groups, the chapter "Biological Warfare Defence" offers that it is due to their low cost effectiveness and the power to cause massive destruction. They can be easily spread out into the atmosphere with relatively lower possibility of detection.

In history, attempted warfare with biological weapons has occurred many times, dating back to antiquity. This became more sophisticated during the 1900s when the goal of such warfare was to select agents and delivery methods that could produce desired effects without harming the proliferators. Events during and following the World War II were particularly clouded by charges and countercharges of experimentation with biological warfare agents. In this context, the use of biological agents on a large scale by Japan on China in October 1940 is offered as an example. During that incident, a Japanese plane allegedly scattered contaminated rice

and fleas over the Chuhsien city of Chekiang Province in China which led to an outbreak of bubonic plague there.

Since the signing of the Biological Weapons Convention in 1972, many significant events and emerging threats in the area of offensive biological warfare have been identified. The number of state sponsored programmes of such type has increased significantly.

The threat of a battlefield or terrorist attack with a biological agent is real. In fact, several potential adversaries of the US have worked to explore the offensive use of biological weapons. The second chapter tries to throw light on the various aftereffects of these biological agents, medical countermeasures. According to the authors, all military medical personnel should have a solid understanding of the biological threat, how to recognize an attack and medical options for defending against that attack. With appropriate use of medical countermeasures either already developed or under development, the number of casualties can be either reduced or halted entirely.

After 9/11, concerns about agro-terrorism increased. It is a well known fact that bioterrorism infrastructure can be hidden away under the garb of legitimate health infrastructure. Food chain is highly vulnerable as it consists of many players, both food and food products. There is a need for balance to be struck between the border security and trade openness. Public Health Security and Bioterrorism Preparedness Response Act or BTA was enacted by the US to address many questions regarding the sanitary measures. In this book, the third article "The Bioterrorism Act of the USA and the International Food Trade: Evaluating WTO, Conformity Effects on Biological Imports" discusses about the various intricacies attached to the enforcement of the BTA and international trade.

In the current global scenario, health and security go hand in hand. The chapter "Discourses on the Securitisation of Public Health: A Survey of Four Countries" analyses the various measures taken by four countries- Australia, Canada, Germany and South Africa

to control bioterrorism. According to the authors, although on a general level, in none of the four countries had the spectre of a bioterrorist threat led to a successful drafting of public health to fight bioterrorism, in all national discourses the changed international environment is acknowledged to some degree. Still, most of these countries are not yet very much concerned about bioterrorism.

In order to reduce the prevailing fear regarding bioterrorism, the Project BioShield was enacted by the US in 2004. This act aims to disperse funds for the stockpiling of vaccines by streamlining the Food and Drug Administration (FDA) approval of new drugs/medical products. The article "Project BioShield, More than Meets the Eye: A Critique of the US's proposed Silver Bullet for Responding to Bio-Terrorism" explores the meaning, purpose, objectives and actual working of the act and whether this is sufficient to counter any bioterrorist attack in the future. The author concludes that the project BioShield is just a realistic premature answer to the ongoing threat of biological and chemical attacks.

The chapter on "The Evolving Field of Biodefence: Therapeutic Developments and Diagnostics" offers an in depth analysis on how biowarfare agents such as anthrax and plague are used as a tool by terrorists. In spite of all efforts made by the scientific community to counter bioterrorism, there is a serious lack of organization in how biodefence is currently addressed. According to the author, our existing response measures are not adequate to meet the challenges of bioterrorism due to lack of cooperation and coordination, ineffective detection networks, lack of time-effective diagnostic methods, etc. These issues however can be easily mitigated with a unified plan of action, orchestrated by a central entity overseeing a comprehensive and organized approach to biodefence.

The biological warfare can be veiled under naturally occurring infectious diseases. In fact, it becomes tricky for the healthcare system across the world to embark upon such kind of infection. India is no exception. Given the fact that the healthcare system and the

infrastructure is generally involved in resolving the naturally occurring infections, a biological terrorist attack cannot be shouldered by it. The article titled "Biological Weapons, Infectious Disease and India's Security imperatives" takes into account the existing public health infrastructures in India and the vulnerability of its food and livestock to such attack and tries to find out a viable solution to resolve these issues. According to the author, in India, a focused threat analysis needs to be carried out to appreciate the dangers of bioterrorism.

The last chapter "Administrative Issues related to Infectious Disease Research in the age of Bioterrorism" offers an in depth analysis of how performing infectious disease research poses serious challenge to the humankind. Still, the threat of bioterrorism has stimulated a reorder of research priorities by the federal government that has resulted in a substantial investment in new ID facilities, research and compliance oversight. New research programmes will hopefully provide the countermeasures needed to overcome challenges of public health and biodefence.

Overall, this book is a valuable addition to the publications on biological warfare. It seems to be quite useful for comparatively new readers of bioterrorism. The book not only analyses the aftereffects of such terrorism, it also makes an attempt to throw light on how countries like the US, Australia, South Africa etc. have made efforts to deal with biological warfare. The book is particularly useful to Indian scholars as it offers an in depth analysis of the challenges faced by our own country in dealing with such terrorism.

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